DOE/ORO/2263

ENVIRONMENTAL MONITORING ON THE OAK RIDGE RESERVATION: 2007 RESULTS

Compiled by
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East Tennessee Technology Park

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Oak Ridge National Laboratory

ORR Surveillance

Y-12 National Security Complex

Y-12 Complex (continued)

Table 1.1. 2007 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	12/12	4500	1100	2100		
Total Suspended Solids	4/4	17.6	0.8	5.1		
pH, Standard Units	12/12	7.6	6.6	7.1	4.0 - 9.0	0
Oil & Grease	1/4	<5.0	3.0	<4.5		
Discharge Point SD 100						
Flow, GPD	52/52	2456400	394000	765700		
Total Suspended Solids	2/4	<2.0	0.6	<1.45		
pH, Standard Units	52/52	8.1	6.9	7.2	6.0 - 9.0	0
Oil & Grease	1/3	<5.0	1.8	<4.2		
Total Residual Chlorine	11/52	0.038	<0.005	<0.012	0.14	0
Discharge Point SD 124						
Flow, GPD	4/4	297700	148000	216200		
pH, Standard Units	4/4	8.2	6.4	7.4	6.0 - 9.0	0
Discharge Point SD 142						
Flow, GPD	3/4	76300	45700	56400		
pH, Standard Units	3 /4	7.8	6.4	7.3	4.0 - 9.0	0
Discharge Point SD 150						
Flow, GPD	3/4	283400	171100	210400		
pH, Standard Units	3/4	7.2	7.0	7.1	4.0 - 9.0	0
Discharge Point SD 154						
Flow, GPD	6/12	134400	24500	83100		
pH, Standard Units	6/12	7.6	6.7	7.2	4.0 - 9.0	0
Oil & Grease	4 /4	2.5	1.3	<1.9		
Total Suspended Solids	4 /4	54.4	26	41.6		
Discharge Point SD 158						
Flow, GPD	5/12	37100	15100	26100		
pH, Standard Units	5/12	7.2	6.7	6.9	4.0 - 9.0	0
Oil & Grease	2/4	<5.0	1.4	<3.3		
Total Suspended Solids	4 /4	4.6	0.9	<2.2		
Discharge Point SD 170						
Flow, GPD	12/12	774500	102600	382700		
Total Suspended Solids	4/4	38.2	1.2	14.4		
pH, Standard Units	12/12	10.8	6.4	7.5	6.0 - 9.0	1
Oil & Grease	2/4	<5.0	0.9	<2.75		
Discharge Point SD 180						
Flow, GPD	12/12	732600	105900	374000		
Total Suspended	4/4	4.27	1.3	2.9		
pH, Standard Units	12/12	8.0	6.7	7.5	6.0 - 9.0	0
Oil & Grease	3/4	<5.0	0.9	<2.1		

Table 1.1 (continued)

Parameter	Number of samples	Concentration[a]			Reference Value[b]	No. of values Exceeding Reference
		Max	Min	Avg		
Discharge Point SD 190						
Flow, GPD	10/12	1094200	213500	658800		
Total Suspended Solids	4/4	4.1	0.6	2.3		
pH, Standard Units	10/12	7.5	6.9	7.2	6.0 - 9.0	0
Oil & Grease	1/4	<5.0	1.7	<4.2		
Discharge Point SD 195						
Flow, GPD	7/12	33400	100	16400		
pH, Standard Units	7/12	7.4	6.8	7.1	4.0 - 9.0	0
Oil & Grease	2/4	<5.0	1.1	<2.5		
Total Suspended Solids	3/4	9.6	7.4	<8.4		
Discharge Point SD 198						
Flow, GPD	2/2	251700	183900	217800		
pH, Standard Units	2/2	8.1	7.2	7.7	4.0 - 9.0	0
Discharge Point SD 210						
Flow, GPD	9/12	618100	110900	352300		
pH, Standard Units	9/12	8.0	6.2	7.3	4.0 - 9.0	0
Total Suspended Solids	4/4	54.8	17.5	36.9		
Oil & Grease	1/4	<5.0	3.4	<4.6		
Discharge Point SD 230						
Flow, GPD	12/12	686600	121100	380600		
pH, Standard Units	12/12	8.3	7.1	7.7	4.0 - 9.0	0
Oil & Grease	1/4	<5.0	1.4	<4.1		
Total Suspended Solids	1/4	<2.0	1.9	<2.0		
Discharge Point SD 250						
Flow, GPD	1/4	38900	38900	38900		
pH, Standard Units	1/4	6.5	6.5	6.5		
Discharge Point SD 280						
Flow, GPD	10/12	8100000	1500	821100		
pH, Standard Units	10/12	8.2	6.7	7.5	4.0 – 9.0	0
Oil & Grease	1/4	<5.0	4.0	<4.8		
Total Suspended Solids	4/4	444	6.0	142		
Discharge Point SD 294						
Flow, GPD	7/12	42900	800	1700		
pH, Standard Units	7/12	7.6	6.7	7.1	4.0 - 9.0	0
Total Suspended Solids	4/4	28.0	4.0	13.8		
Oil & Grease	1/4	<5.0	3.1	<4.5		
Discharge Point SD 334						
Flow, GPD	1/1	20500	20500	20500		
pH, Standard Units	1/1	7.2	7.2	7.2	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 340						
Flow, GPD	11/12	314400	56300	187400		
pH, Standard Units	11/12	8.2	7.0	7.4	4.0 - 9.0	0
Oil & Grease	1/4	<5.0	2.0	<4.25		
Total Suspended Solids	4/4	18.7	1.3	9.4		
Discharge Point SD 350						
Flow, GPD	9/12	22500	2200	10500		
pH, Standard Units	9/12	7.8	6.9	7.3	4.0 - 9.0	0
Oil & Grease	1/4	<5.0	2.7	<4.4		
Total Suspended Solids	4/4	62.2	15.3	31.4		
Discharge Point SD 380						
Flow, GPD	3/4	591500	365000	444200		
pH, Standard Units	3/4	8.1	6.9	7.5	4.0 - 9.0	0
Discharge Point SD 382						
Flow, GPD	12/12	69400	11800	38300		
pH, Standard Units	12/12	7.9	6.7	7.3	4.0 - 9.0	0
Oil & Grease	2/4	<5.0	0.9	<3.6		
Total Suspended Solids	2/4	6.9	<2.0	<3.6		
Discharge Point SD 390						
Flow, GPD	4/12	172000	64100	100800		
pH, Standard Units	4/12	7.2	6.7	6.9	4.0 - 9.0	0
Total Suspended Solids	3/4	5.0	1.6	2.9		
Oil & Grease	2/4	<5.0	1.4	<3.2		
Discharge Point SD 410						
Flow, GPD	2/2	37400	24700	31100		
pH, Standard Units	2/2	7.9	7.4	7.7	4.0 - 9.0	0
Discharge Point SD 430						
Flow, GPD	12/12	548800	90900	299300		
pH, Standard Units	12/12	8.2	6.9	7.5	4.0 - 9.0	0
Oil & Grease	2/4	<5.0	1.5	<3.35		
Total Suspended Solids	4/4	1.2	0.7	0.95		
Discharge Point SD 490						
Flow, GPD	12/12	2252300	424300	1222200		
pH, Standard Units	12/12	8.0	6.5	7.3	4.0 - 9.0	0
Total Suspended Solids	3/4	<2.0	0.6	1.1		
Oil & Grease	1/4	<5.0	1.9	<4.2		
Discharge Point SD 510						
Flow, GPD	3/4	399600	238600	294900		
pH, Standard Units	3/4	7.7	5.4	6.8	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 532						
Flow, GPD	2/2	20700	12700	16700		
pH, Standard Units	2/2	7.2	6.9	7.1		
Discharge Point SD 570						
Flow, GPD	2/4	49100	23200	36200		
pH, Standard Units	2/4	7.2	6.7	7.0		
Discharge Point SD 660						
Flow, GPD	2/2	7700	2000	4900		
pH, Standard Units	2/2	7.3	6.9	7.1	4.0 - 9.0	0
Discharge Point SD 690						
Flow, GPD	3/4	985200	595000	731400		
pH, Standard Units	3/4	7.7	7.0	7.4	4.0 - 9.0	0
Discharge Point SD 710						
Flow, GPD	12/12	1217800	204300	665500		
Total Suspended Solids	1/4	6.5	<5.0	<3.1		
pH, Standard Units	12/12	7.9	6.6	7.2	4.0 - 9.0	0
Oil & Grease	2/4	<5.0	0.9	<3.25		
Discharge Point SD 724						
Flow, GPD	5/12	136000	12700	65100		
pH, Standard Units	5/12	7.5	7.0	7.2	4.0 – 9.0	0
Total Suspended Solids	2/4	20.8	1.0	10.9		
Oil & Grease	1/4	<5.0	1.5	<3.25		
Discharge Point SD 890						
Flow, GPD	1/4	62000	62000	62000		
pH, Standard Units	1/4	7.1	7.1	7.1	4.0 - 9.0	0
Discharge Point SD 900						
Flow, GPD	2/2	64200	35600	49900		
pH, Standard Units	2/2	7.5	7.1	7.3	4.0 - 9.0	0
Discharge Point SD 992						
Flow, GPD	7/12	342300	1000	119700		
Total Suspended Solids	4/4	61.5	15.9	31.1		
pH, Standard Units	7/12	6.7	3.3	6.2	4.0 - 9.0	1
Oil & Grease	1/4	<5.0	1.0	<4.0		
Discharge Point SD 996						
Flow, GPD	2/2	128700	74400	101600		
pH, Standard Units	2/2	7.8	7.0	7.4		

[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[a]	Average[a]			
				K-716				
U-234	2	1.1e+00	<2.4e-01	<6.5e-01	<6.5e-01	5.0e+02	1.3e-01	1.3e-03
U-238	2	4.4e-01	<2.3e-01	<3.3e-01	<3.3e-01	6.0e+02	5.6e-02	5.6e-04
Beta activity (pCi/L)	2	4.2e+00	3.0e+00	3.6e+00	3.6e+00	*b*	*b*	*b*
All listed Isotopes								2.2e-03

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

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[a]	Average[a]			
K-901-A (settling basin for surface water runoff)								
Tc-99	2	1.2e+01	<1.8e+00	6.8e+00	6.8e+00	1.0e+05	6.8e-03	6.8e-05
U-234	2	2.7e-00	1.2e+00	2.0e+00	2.0e+00	5.0e+02	3.9e-01	3.9e-03
U-238	2	1.3e+00	5.4e-01	9.0e-01	9.0e-01	6.0e+02	1.5e-01	1.5e-03
Alpha activity	2	3.5e+00	1.6e+00	2.5e+00	2.5e+00	*b*	*b*	*b*
Beta activity	2	1.1e+01	3.6e+00	7.4e+00	7.4e+00	*b*	*b*	*b*
All listed isotopes								5.6e-03

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

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[a]	Average[a]			
K-1007-B (settling basin for surface water runoff)								
U-234	2	1.1e+00	7.7e-01	9.5e-01	9.5e-01	5.0e+02	1.9e-01	1.9e-03
U-238	2	4.5e-01	3.7e-01	4.1e-01	4.1e-01	6.0e+02	6.9e-02	6.9e-04
Alpha activity	2	2.6e+00	<6.3e-01	1.6e+00	1.6e+00	*b*	*b*	*b*
Beta activity	2	7.1e+00	5.6e+00	6.3e+00	6.3e+00	*b*	*b*	*b*
All listed isotopes								2.7e-03

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

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[a]	Average[a]			
K-1407-J (treated effluents from Central Neutralization Facility and K-1435 Waste Water Treatment System								
Am-241	12	4.7e-02	2.1e-01	6.5e-02	4.7e-02	3.0e+01	1.6e-01	1.6e-03
C-14	12	2.5e+01	-1.1e+01	6.0e+00	6.0e+00	7.0e+04	8.5e-03	8.5e-05
Co-60	8	5.6e+00	-9.0e-01	1.0e-02	6.3e-01	5.0e+03	1.3e-02	1.3e-04
Cs-137	12	7.8e+01	-6.4e-01	4.8e+00	1.5e+01	3.0e+03	5.1e-01	5.1e-03
H-3	12	6.5e+04	-4.5e+02	2.8e+03	7.3e+03	2.0e+06	3.6e-01	3.6e-03
I-131	8	6.2e+00	-3.5e+00	-5.5e-02	8.9e-01	3.0e+03	3.0e-02	3.0e-04
Np-237	12	2.8e-01	0.0e+00	1.1e-01	1.2e-01	3.0e+01	3.9e-01	3.9e-03
Pu-238	12	9.0e-02	-7.0e-02	1.5e-02	1.7e-02	4.0e+01	4.3e-02	4.3e-04
Pu-239	12	1.1e-01	-2.0e-02	4.5e-02	4.0e-02	3.0e+01	1.3e-01	1.3e-03
Tc-99	12	1.2e+04	0.0e+00	9.0e+02	2.4e+03	1.0e+05	2.4e+00	2.4e-02
Th-230	8	6.7e-01	0.0e+00	3.6e-01	3.6e-01	3.0e+02	1.2e-01	1.2e-03
Th-234	8	1.0e+03	0.0e+00	7.8e+01	3.4e+02	1.0e+04	3.4e+00	3.4e-02
U-234	12	5.1e+02	0.0e+00	6.5e+01	1.3e+02	5.0e+02	2.6e+01	2.6e-01
U-235	12	3.6e+01	0.0e+00	7.6e+00	1.6e+01	6.0e+02	1.8e+00	1.8e-02
U-236	12	1.7e+01	0.0e+00	1.5e+00	4.0e+00	5.0e+02	8.1e-01	8.1e-03
U-238	12	1.2e+03	4.3e+02	1.9e+02	3.8e+02	6.0e+02	6.3e+01	6.3e-01
Alpha activity	12	6.4e+02	2.5e+01	8.0e+01	1.3e+02	*b*	*b*	*b*
Beta activity	12	5.3e+03	2.2e+02	8.6e+02	1.5e+03	*b*	*b*	*b*
All listed Isotopes								1.0e+00

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

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[a]	Average[a]			
				K-1700 (Mitchell Branch)				
Tc-99	4	1.2e+02	6.6e+01	9.9e+01	9.6e+01	1.0e+05	9.6e-02	9.6e-04
U-234	4	3.4e+01	2.8e+01	3.2e+01	3.1e+01	5.0e+02	6.3e+00	6.3e-02
U-235	4	3.2e+00	2.3e+00	2.4e+00	2.6e+00	6.0e+02	4.3e-01	4.3e-03
U-238	4	2.1e+01	1.6e+01	1.8e+01	1.8e+01	6.0e+02	3.0e+00	3.0e-02
Alpha activity	4	4.4e+01	3.7e+01	4.0e+01	4.0e+01	*b*	*b*	*b*
Beta activity	4	8.6e+01	5.6e+01	7.4e+01	7.3e+01	*b*	*b*	*b*
All listed Isotopes								1.2e-01

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

Table 1.7. 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[a]	Average[a]			
				K-1710				
U-234	2	8.7e-01	<2.6-01	5.6e-01	5.6e-01	5.0e+02	1.1e-01	1.1e-03
U-238	2	1.4e+00	8.9e-01	1.2e+00	1.2e+00	6.0e+02	1.9e-01	1.9e-03
Beta activity	2	5.2e+00	<3.4e+00	4.3e+00	4.3e+00	*b*	*b*	*b*
All listed Isotopes								3.3e-03

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

Table 1.8. 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[a]	Average[a]			
				MIK 1.4				
U-234	5	6.0e-01	<6.6e-02	<2.5e-01	<1.6e-01	5.0e+02	6.7e-02	6.7e-04
U-238	5	<3.2e-01	<4.6e-02	<2.3e-01	<1.7e-01	6.0e+02	3.8e-02	3.8e-04
Beta activity	5	10.7e+00	<1.9e+00	4.5e+00	5.5e+00	*b*	*b*	*b*
All listed Isotopes								1.1e-03

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

Table 1.9. 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[a]	Average[a]			
				CRK 16				
U-234	2	5.0e-01	<3.2e-01	4.1e-01	4.1e-01	5.0e+02	8.2e-02	8.2e-04
Beta activity	2	5.4e+00	2.8e+00	4.1e+00	4.1e+00	*b*	*b*	*b*
All listed Isotopes								3.0e-04

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

Table 1.10. 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[a]	Average[a]			
				CRK 23				
H-3	2	4.4e+02	<1.3e+01	2.3e+02	2.3e+02	2.0e+06	1.1e-02	1.1e-04
Sr-90	2	8.1e-01	<4.0e-01	6.1e-01	6.1e-01	1.0e+03	6.1e-02	6.1e-04
Beta activity	2	3.3e+00	<2.9e+00	3.1e+00	3.1e+00	*b*	*b*	*b*
All listed Isotopes								2.2e-03

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

Table 1.11. 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[a]	Average[a]			
				MIK 0.7				
Tc-99	1	1.6e+02	1.6e+02	1.6e+02	1.6e+02	1.0e+05	1.6e-01	1.6e-03
U-234	1	6.5e+01	6.5e+01	6.5e+01	6.5e+01	5.0e+02	1.3e+01	1.3e-01
U-235	1	4.3e+00	4.3e+00	4.3e+00	4.3e+00	6.0e+02	7.2e-01	7.2e-03
U-238	1	3.2e+01	3.2e+01	3.2e+01	3.2e+01	6.0e+02	5.4e+00	5.4e-02
Alpha activity	1	7.3e+01	7.3e+01	7.3e+01	7.3e+01	*b*	*b*	*b*
Beta activity	1	1.1e+02	1.1e+02	1.1e+02	1.1e+02	*b*	*b*	*b*
All listed Isotopes								1.9e-01

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

Table 1.12. 2007 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 (µg/L)	2/2	220	99	160		
Calcium (µg/L)	2/2	38000	36000	37000		
Dissolved oxygen (mg/L)	2/2	12	9.5	11	5.0 min	0
Iron (µg/L)	2/2	190	95	143		
Magnesium (µg/L)	2/2	11000	11000	11000		
Manganese (µg/L)	2/2	48	41	45		
pH (standard units)	2/2	7.9	7.4	7.7	6.5-8.5	0
Potassium (µg/L)	2/2	2100	2000	2050		
Sodium (µg/L)	2/2	6400	5500	5950		
Temperature (C°)	2/2	25	11	18		
Zinc (µg/L)	2/2	8.4	1.1	4.8	120	0

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

Table 1.13. 2007 ETTP parameters detected at CRK-23

Parameter	Number detected/ number of Samples	Detected results			Reference Value[a]	Number of values Exceeding Reference
		Max	Min	Avg		
Aluminum (µg/L)	2/2	140	71	106		
Calcium (µg/L)	2/2	39000	36000	37500		
Dissolved oxygen (mg/L)	2/2	13	9.0	11	5.0 min	0
Iron (µg/L)	1/2	110	64	87		
Magnesium (µg/L)	2/2	11000	11000	11000		
Manganese (µg/L)	2/2	48	31	40		
pH (standard units)	2/2	7.7	7.7	7.7	6.5-8.5	0
Potassium (µg/L)	2/2	2000	1900	1950		
Sodium (µg/L)	2/2	6600	5600	6100		
Temperature (C°)	2/2	26	11	19		
Zinc (µg/L)	1/2	2.4	<1.0	<1.7	120	0

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

Table 1.14. 2007 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	13	12	12.5	5.0 min	0
pH (standard units)	2/2	8	7.7	7.9	6.5 - 8.5	0
Temperature (C°)	2/2	26	11	18		

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

Table 1.15. 2007 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 (µg/L)	2/2	280	120	200		
Calcium (µg/L)	2/2	42000	38000	40000		
Dissolved Oxygen (mg/L)	2/2	12	6.0	9.2	5.0 min	0
Iron (µg/L)	1/2	640	200	420		
Magnesium (µg/L)	2/2	13000	12000	12500		
Manganese (µg/L)	2/2	100	29	65		
pH (standard units)	2/2	7.8	7.3	7.6	6.5-8.5	0
Potassium (µg/L)	2/2	1500	1300	1400		
Sodium (µg/L)	2/2	1600	1200	1400		
Temperature (C°)	2/2	25	7.8	16		
Zinc (µg/L)	2/2	5.6	2.3	4.0	120	0

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

Table 1.16. 2007 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 (µg/L)	2/2	150	90	120		
Calcium (µg/L)	2/2	38000	31000	34500		
Dissolved Oxygen (mg/L)	2/2	15	7.8	11.2	5.0 min	0
Iron (µg/L)	2/2	400	240	320		
Magnesium (µg/L)	2/2	12000	10000	11000		
Manganese (µg/L)	2/2	71	63	67		
pH (standard units)	2/2	8.8	8.5	8.7	6.5 - 8.5	1
Potassium (µg/L)	2/2	2500	2300	2400		
Sodium (µg/L)	2/2	4300	2900	3600		
Temperature (C°)	2/2	26	9.6	17.7		
Zinc (µg/L)	2/2	6.7	2.6	4.7	120	0

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

Table 1.17. 2007 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 (µg/L)	6/10	2.7	<1.0	<1.8		
1,2 Dichloroethane (µg/L)	1/10	2.2	<0.7	<1.3	370	0
1,1 Dichloroethene (µg/L)	2/10	1.9	<0.87	<1.2	32	0
1,1,2-Trichloro-1,2,2-Trifluoroethane (µg/L)	2/10	1.5	<1.0	<1.6		
Acetone (µg/L)	2/10	<50	<10	<15		
Barium (µg/L)	2/5	72	49	60		
Calcium (µg/L)	5/5	88000	76000	81000		
Carbon tetrachloride (µg/L)	7/10	3.1	<1.0	<2.1	16	0
Chloroethane (µg/L)	1/10	<2.5	<1.0	<1.5		
Chloroform (µg/L)	7/10	3.8	<1.0	<2.5	4.7	0
Chromium (µg/L)	5/5	140	41	77.6	162	2
cis-1,2 Dichloroethene (µg/L)	6/10	72	<1.0	<48		
Dissolved Oxygen (mg/L)	4/4	10.4	2.8	7.4	5.0 min	1
Iron (µg/L)	5/5	280	120	217		
Lithium (µg/L)	2/2	8.7	8.2	8.5		
Magnesium (µg/L)	5/5	16000	12000	14000		
Manganese (µg/L)	5/5	240	170	210		
Nickel (µg/L)	5/5	13	8.3	10	117	0
Potassium (µg/L)	5/5	5100	2600	4000		
Sodium (µg/L)	5/5	20000	9100	16000		
Temperature (C°)	5/5	23	9.9	15		
Tetrachloroethene (µg/L)	5/10	2.8	<1.0	<1.6	33	0
Trichloroethene (µg/L)	5/10	86	<1.0	55	810	0
Vinyl Chloride (µg/L)	7/10	6.7	<1.0	<4.6	5300	0
pH (standard units)	5/5	7.8	7.2	7.4	6.5 - 8.5	0
Zinc (µg/L)	5/5	22	2.0	8.0	120	0

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

Table 1.18. 2007 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	12	8.4	10.4	5.0 min	0
pH (standard units)	2/2	7.0	6.9	7.0	6.5 - 8.5	0
Temperature (C°)	2/2	23	8	16		

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

Table 1.19. 2007 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		
1,2 Dichloroethane (µg/L)	1/4	3.2	<0.7	<1.4	370	0
Aluminum (µg/L)	4/4	1000	41	290		
Barium (µg/L)	1/4	75	45	53		
Calcium (µg/L)	4/4	25000	2000	22500		
Chloroethane (µg/L)	1/4	1.1	<1.0	<1.0		
Dissolved Oxygen (mg/L)	4/4	11.5	6.9	8.9	5.0 min.	0
Iron (µg/L)	3/4	1700	100	550		
Lead (ug/L)	1/4	3.2	<1.1	<1.8		
Magnesium (µg/L)	4/4	15000	11000	13000		
Manganese (µg/L)	4/4	330	32	124		
pH (standard units)	4/4	8	7.1	7.4	6.5 - 8.5	0
Potassium (µg/L)	4/4	1200	850	970		
Sodium (µg/L)	4/4	880	540	740		
Temperature (C°)	4/4	22	7.9	11.7		
Zinc (µg/L)	1/4	6.1	<1.3	<3.4	120	0

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

Table 1.20. 2007 ETTP parameters detected at MIK 0.7

Parameter	Number detected/ number of Samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
1,1-Dichloroethane (µg/L)	1/1	1.3	1.3	1.3		
1,2 Dichloroethane (µg/L)	1/1	0.5	0.5	0.5	370	0
cis-1,2 Dichlorethene (ug/L)	1/1	20	20	20		
1,1,2-Trichloro-1,2,2,Trifluoroethane (µg/L)	1/1	1.2	1.2	1.2		
Aluminum (µg/L)	1/1	58	58	58		
Calcium (µg/L)	1/1	84000	84000	84000		
Chromium (µg/L)	1/1	200	200	200	163	1
Dissolved Oxygen (mg/L)	1/1	9.8	9.8	9.8	5.0 min.	0
Iron (µg/L)	1/1	164	164	164		
Lithium (µg/L)	1/1	9.1	9.1	9.1		
Magnesium (µg/L)	1/1	12600	12600	12600		
Manganese (µg/L)	1/1	97	97	97		
Nickel (µg/L)	1/1	8.3	8.3	8.3	118	0
pH (standard units)	1/1	7.8	7.8	7.8	6.5 - 8.5	0
Potassium (µg/L)	1/1	4400	4400	4400		
Sodium (µg/L)	1/1	24000	24000	24000		
Temperature (C°)	1/1	15	15	15		
Tetrachloroethene (µg/L)	1/1	14	14	14	33	0
Trichloroethene (µg/L)	1/1	39	39	39	810	0
Zinc (µg/L)	1/1	9	9	9	120	0

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

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Well 857 - WOC Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	0.02	0.02	n/a
Dissolved Oxygen (ppm)	9.1	8.9	n/a
pH (Std Unit)	4.6	4.9	n/a
RedOx (mV)	260	250	n/a
Temperature (deg C)	15	16	0.5[1]
Turbidity (NTU)	0.0	0.0	1[2]
Metals (mg/L)			
Aluminum	4.5	0.56	(0.05, 0.2)[3]
Arsenic	0.0018	<0.0015	0.01[1]
Barium	0.029	0.016	2[1]
Beryllium	0.00027	<0.0001	0.004[1]
Boron	0.0091	0.0055	n/a
Cadmium	<0.0001	0.00012	0.005[1]
Calcium	0.38	0.39	n/a
Chromium	0.033	0.0068	1[1]
Cobalt	0.0018	0.00042	n/a
Copper	0.003	0.00065	1.3[2]
Iron	3.0	0.43	0.3[3]
Lead	0.013	0.003	0.005[1]
Lithium	0.003	<0.002	n/a
Magnesium	E1.6	E1.2	n/a
Manganese	0.12	0.02	0.05[3]
Molybdenum	0.00059	0.00011	n/a
Nickel	0.0098	0.0033	0.1[1]
Phosphorous	0.054	<0.02	n/a

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Potassium	1.7	0.52	n/a
Silicon	7.1	5.0	n/a
Sodium	0.67	0.84	n/a
Strontium	0.0039	0.0036	n/a
Sulfur	0.035	0.035	n/a
Thallium	0.00064	<0.0003	0.002[1]
Thorium	0.00078	<0.0002	n/a
Titanium	0.069	0.01	n/a
Uranium	0.00012	<0.00005	n/a
Zinc	0.013	0.0072	5[3]
Zirconium	0.0042	<0.0005	n/a
Radionuclides (pCi/L) (d)			
Tritium	510*	410*	20,000[2]
Semi-volatile organics (ug/L)			
Bis(2-ethylhexyl)phthalate	J3.9	J8.9	n/a
Volatile organics (ug/L)			
Methylene chloride	U5.0	BJ2.7	5[1]
Well 858 - WOC Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	0.26	0.23	n/a
Dissolved Oxygen (ppm)	1.9	1.4	n/a
pH (Std Unit)	8.1	6.9	n/a
RedOx (mV)	140	170	n/a
Temperature (deg C)	15	17	30.5[1]
Turbidity (NTU)	2.0	10	1[2]

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Metals (mg/L)			
Aluminum	0.038	0.58	(0.05, 0.2)[3]
Barium	0.11	0.12	2[1]
Boron	0.008	0.0098	n/a
Cadmium	<0.0001	0.00024	0.005[1]
Calcium	27	31	n/a
Chromium	0.0026	<0.001	1[1]
Cobalt	0.00018	0.00039	n/a
Copper	0.00054	0.0013	1.3[2]
Iron	0.16	0.51	0.3[3]
Lead	<0.0005	0.002	0.005[1]
Lithium	0.0047	0.0064	n/a
Magnesium	E5.5	E6.9	n/a
Manganese	0.0012	0.035	0.05[3]
Molybdenum	0.00034	0.00033	n/a
Nickel	0.00091	0.0029	0.1[1]
Phosphorous	<0.02	0.034	n/a
Potassium	0.93	1.1	n/a
Silicon	7.1	7.4	n/a
Sodium	4.4	5.8	n/a
Strontium	0.085	0.09	n/a
Sulfur	4.1	4.2	n/a
Titanium	0.0022	0.0068	n/a
Uranium	0.00011	<0.00005	n/a
Zinc	0.0031	0.0036	5[3]
Radionuclides (pCi/L) (d)			
Beta activity	36*	18*	50[2]

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Volatile organics (ug/L)			
Methylene chloride	U5.0	BJ2.5	5[1]
Well 1190 - WOC Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	1.0	1.0	n/a
Dissolved Oxygen (ppm)	4.3	2.2	n/a
pH (Std Unit)	6.9	7.1	n/a
RedOx (mV)	-190	-200	n/a
Temperature (deg C)	19	19	30.5[1]
Turbidity (NTU)	1.0	2.0	1[2]
Metals (mg/L)			
Aluminum	0.0055	<0.005	(0.05, 0.2)[3]
Barium	0.7	0.78	2[1]
Boron	0.032	0.036	n/a
Calcium	130	150	n/a
Chromium	0.0019	<0.001	1[1]
Cobalt	0.00036	0.00046	n/a
Copper	0.00069	0.00064	1.3[2]
Iron	0.93	0.94	0.3[3]
Lithium	0.023	0.025	n/a
Magnesium	18	21	n/a
Manganese	0.076	0.068	0.05[3]
Nickel	0.0032	0.0056	0.1[1]
Potassium	2.0	2.1	n/a
Silicon	7.9	8.8	n/a

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Sodium	11	13	n/a
Strontium	0.48	0.52	n/a
Sulfur	0.28	0.35	n/a
Thallium	<0.0004	0.00052	0.002[1]
Titanium	0.0027	0.0023	n/a
Uranium	0.0004	0.00029	n/a
Zinc	0.0034	<0.0026	5[3]
Zirconium	0.00057	<0.0005	n/a
Radionuclides (pCi/L) (d)			
Tritium	26,000*	26,000*	20,000[2]
Semi-volatile organics (ug/L)			
Bis(2-ethylhexyl)phthalate	12	J9.5	n/a
Well 1191 - WOC Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	0.62	0.65	n/a
Dissolved Oxygen (ppm)	3.5	18	n/a
pH (Std Unit)	7.3	7.0	n/a
RedOx (mV)	-170	-78	n/a
Temperature (deg C)	18	17	30.5[1]
Turbidity (NTU)	1.0	4.0	1[2]
Metals (mg/L)			
Aluminum	0.0095	<0.005	(0.05, 0.2)[3]
Arsenic	<0.0015	0.0024	0.01[1]
Barium	0.13	0.23	2[1]
Boron	0.015	0.02	n/a

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Calcium	56	56	n/a
Chromium	0.0017	<0.001	1[1]
Cobalt	0.00053	0.00096	n/a
Copper	0.00053	0.00039	1.3[2]
Iron	5.4	10	0.3[3]
Magnesium	15	13	n/a
Manganese	0.29	0.28	0.05[3]
Molybdenum	0.00058	0.00038	n/a
Nickel	0.015	0.005	0.1[1]
Phosphorous	0.077	0.042	n/a
Potassium	2.9	3.8	n/a
Silicon	2.6	3.2	n/a
Sodium	12	15	n/a
Strontium	0.12	0.13	n/a
Sulfur	2.9	0.14	n/a
Uranium	0.0011	0.00011	n/a
Zinc	0.0027	<0.0026	5[3]
Zirconium	0.00062	<0.0005	n/a
Radionuclides (pCi/L) (d)			
Alpha activity	U4.0	7.2*	15[2]
Beta activity	300*	330*	50[2]
Lead-214	19*		8,000[4]
Strontium-89/90	170*	180*	40[4]
Tritium	38,000*	53,000*	20,000[2]
Semi-volatile organics (ug/L)			
Bis(2-ethylhexyl)phthalate	J4.3	U10	n/a

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Volatile organics (ug/L)			
Methylene chloride	U5.0	J2.6	5[1]
		Well 1239 - WOC Discharge Area Exit Pathway	
Field measurements			
Conductivity (mS/cm)	1.1	1.1	n/a
Dissolved Oxygen (ppm)	3.8	6.1	n/a
pH (Std Unit)	9.3	9.5	n/a
RedOx (mV)	60	58	n/a
Temperature (deg C)	15	16	30.5[1]
Turbidity (NTU)	0.0	1.0	1[2]
Metals (mg/L)			
Aluminum	0.15	0.26	(0.05, 0.2)[3]
Arsenic	0.0036	0.0018	0.01[1]
Barium	0.055	0.05	2[1]
Boron	0.65	0.77	n/a
Calcium	0.84	0.93	n/a
Chromium	0.0023	0.0046	1[1]
Cobalt	<0.0001	0.00011	n/a
Copper	0.0025	0.0041	1.3[2]
Iron	0.13	0.17	0.3[3]
Lithium	0.037	0.041	n/a
Magnesium	0.2	0.24	n/a
Manganese	0.0027	0.0027	0.05[3]
Molybdenum	0.0018	0.0018	n/a
Nickel	0.0016	0.0018	0.1[1]
Phosphorous	0.069	0.09	n/a

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Potassium	2.0	2.6	n/a
Silicon	4.7	4.9	n/a
Sodium	180	240	n/a
Strontium	0.054	0.055	n/a
Sulfur	9.7	11	n/a
Thallium	<0.0004	0.00038	0.002[1]
Thorium	0.00034	0.00029	n/a
Titanium	0.0073	0.0086	n/a
Uranium	0.0014	0.0012	n/a
Zinc	0.0077	0.0035	5[3]
Zirconium	0.0017	0.0012	n/a
Radionuclides (pCi/L) (d)			
Beta activity	9.3*	U1.9	50[2]
Semi-volatile organics (ug/L)			
Bis(2-ethylhexyl)phthalate	U11	33	n/a
Diethyl phthalate	J3.0	U10	n/a
Well 1198 - 7000 Area/Bearden Creek Watershed			
Field measurements			
Conductivity (mS/cm)	0.74	0.85	n/a
Dissolved Oxygen (ppm)	6.3	8.5	n/a
pH (Std Unit)	6.6	7.0	n/a
RedOx (mV)	150	130	n/a
Temperature (deg C)	15	16	30.5[1]
Turbidity (NTU)	0.0	1.0	1[2]
Metals (mg/L)			

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Aluminum	0.36	0.51	(0.05, 0.2)[3]
Barium	0.029	0.036	2[1]
Boron	0.0086	0.011	n/a
Calcium	120	150	n/a
Chromium	0.005	0.0018	1[1]
Cobalt	0.00029	0.00046	n/a
Copper	0.0013	0.0014	1.3[2]
Iron	0.77	1.4	0.3[3]
Lithium	0.0022	0.0027	n/a
Magnesium	4.1	E6.5	n/a
Manganese	0.0036	0.013	0.05[3]
Molybdenum	0.00051	0.00028	n/a
Nickel	0.0071	0.008	0.1[1]
Potassium	1.6	1.4	n/a
Silicon	4.6	4.8	n/a
Silver	0.00062	0.0015	0.1[3]
Sodium	2.5	3.9	n/a
Strontium	0.17	0.22	n/a
Sulfur	3.6	3.1	n/a
Titanium	0.004	0.0071	n/a
Uranium	0.00029	0.00031	n/a
Zinc	0.0039	0.0033	5[3]
Radionuclides (pCi/L) (d)			
Tritium	930*	820*	20,000[2]
Semi-volatile organics (ug/L)			
Bis(2-ethylhexyl)phthalate	U11	J2.8	n/a
Diethyl phthalate	J2.7	U10	n/a

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Volatile organics (ug/L)			
Toluene	U1.0	J0.33	1,000[1]
Well 1199 - 7000 Area/Bearden Creek Watershed			
Field measurements			
Conductivity (mS/cm)	0.59	0.6	n/a
Dissolved Oxygen (ppm)	5.7	6.9	n/a
pH (Std Unit)	7.9	8.1	n/a
RedOx (mV)	-260	-270	n/a
Temperature (deg C)	16	16	30.5[1]
Turbidity (NTU)	1.0	1.0	1[2]
Metals (mg/L)			
Aluminum	0.02	<0.005	(0.05, 0.2)[3]
Barium	0.11	0.096	2[1]
Boron	0.28	0.25	n/a
Calcium	38	35	n/a
Chromium	0.0018	<0.001	1[1]
Cobalt	0.00028	0.00021	n/a
Copper	0.00052	0.00045	1.3[2]
Iron	0.18	0.24	0.3[3]
Lithium	0.01	0.012	n/a
Magnesium	39	E44	n/a
Manganese	0.0012	<0.001	0.05[3]
Molybdenum	0.0002	<0.0001	n/a
Nickel	0.00071	0.0014	0.1[1]
Potassium	5.1	4.4	n/a
Silicon	8.6	9.0	n/a

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Sodium	6.1	7.6	n/a
Strontium	3.4	3.1	n/a
Sulfur	1.7	1.7	n/a
Thallium	0.00058	<0.0003	0.002[1]
Thorium	0.0003	<0.0002	n/a
Titanium	<0.002	0.0023	n/a
Uranium		<0.00005	n/a
Zinc	0.0021	<0.0026	5[3]
Zirconium	0.0016	<0.0005	n/a
Radionuclides (pCi/L) (d)			
Beta activity	9.3*	U9.6*	50[2]
Tritium	2,800*	1,900*	20,000[2]
Semi-volatile organics (ug/L)			
Diethyl phthalate	J2.7	J3.1	n/a
Volatile organics (ug/L)			
Benzene	U1.0	J0.34	5[1]
Methylene chloride	U5.0	BJ2.6	5[1]
Tetrachloroethene	J0.36	U1.0	5[1]
Toluene	U1.0	J0.62	1,000[1]
Spring BC-01 - 7000 Area/Bearden Creek Watershed(e)			
Field measurements			
Conductivity (mS/cm)	0.15		n/a
Dissolved Oxygen (ppm)	12		n/a
pH (Std Unit)	8.0		n/a

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Temperature (deg C)	16		30.5[1]
Turbidity (NTU)	12		1[2]
Metals (mg/L)			
Aluminum	E0.76		(0.05, 0.2)[3]
Antimony	0.0011		0.006[1]
Barium	0.028		2[1]
Boron	0.012		n/a
Calcium	17		n/a
Cobalt	0.00034		n/a
Copper	0.00087		1.3[2]
Iron	0.57		0.3[3]
Magnesium	2.9		n/a
Manganese	0.014		0.05[3]
Molybdenum	0.00017		n/a
Nickel	0.00083		0.1[1]
Potassium	2.4		n/a
Silicon	5.3		n/a
Sodium	1.1		n/a
Strontium	0.03		n/a
Sulfur	2.7		n/a
Thorium	0.00063		n/a
Titanium	0.009		n/a
Uranium	0.00011		n/a
Zinc	0.0045		5[3]
Zirconium	0.0036		n/a
Radionuclides (pCi/L) (d)			
Tritium	230*		20,000[2]

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
		Well 923 - East End Discharge Point	
Field measurements			
Conductivity (mS/cm)	0.52	5.1	n/a
Dissolved Oxygen (ppm)	5.4	16	n/a
pH (Std Unit)	7.3	7.5	n/a
RedOx (mV)	74	93	n/a
Temperature (deg C)	17	17	30.5[1]
Turbidity (NTU)	3.0	3.0	1[2]
Metals (mg/L)			
Aluminum	0.011	0.014	(0.05, 0.2)[3]
Barium	0.1	0.11	2[1]
Boron	0.019	0.022	n/a
Calcium	60	69	n/a
Chromium	0.0023	<0.001	1[1]
Cobalt	0.00016	0.00017	n/a
Copper	0.0012	0.001	1.3[2]
Iron	1.9	1.4	0.3[3]
Lead	0.00068	<0.0005	0.005[1]
Lithium	0.012	0.014	n/a
Magnesium	11	12	n/a
Manganese	0.048	0.042	0.05[3]
Molybdenum	0.00014	<0.0001	n/a
Nickel	0.0013	0.0021	0.1[1]
Potassium	1.7	1.9	n/a
Silicon	8.5	9.4	n/a

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Sodium	3.6	4.1	n/a
Strontium	0.46	0.48	n/a
Sulfur	14	15	n/a
Thallium	0.00059	<0.0003	0.002[1]
Titanium	0.0027	0.0029	n/a
Uranium	0.00005	<0.00005	n/a
Zinc	0.0073	0.0044	5[3]
Zirconium	0.00078	<0.0005	n/a
Spring/Surface Water Monitoring Point EE-01 - East End Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	0.21	0.3	n/a
Dissolved Oxygen (ppm)	8.7	5.6	n/a
pH (Std Unit)	7.4	6.5	n/a
Temperature (deg C)	18	20	30.5[1]
Turbidity (NTU)	12	0.0	1[2]
Metals (mg/L)			
Aluminum	E0.51	0.28	(0.05, 0.2)[3]
Barium	0.052	0.079	2[1]
Boron	0.02	0.027	n/a
Cadmium	<0.0001	0.00032	0.005[1]
Calcium	30	41	n/a
Chromium	0.0014	0.0011	1[1]
Cobalt	0.00074	0.00034	n/a
Copper	0.00081	0.001	1.3[2]
Iron	0.78	0.54	0.3[3]

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Magnesium	6.1	9.7	n/a
Manganese	0.098	E0.22	0.05[3]
Molybdenum	0.00045	0.00031	n/a
Nickel	0.0013	0.0017	0.1[1]
Potassium	1.6	2.5	n/a
Silicon	4.2	4.0	n/a
Sodium	3.4	4.7	n/a
Strontium	0.072	0.11	n/a
Sulfur	6.4	7.3	n/a
Thallium	0.00062	0.00044	0.002[1]
Thorium	0.00023	<0.0002	n/a
Titanium	0.011	0.0038	n/a
Uranium	0.00012	0.00019	n/a
Zinc	0.0044	0.016	5[3]
Zirconium	0.0011	<0.0005	n/a
Radionuclides (pCi/L) (d)			
Tritium	700*	250*	20,000[2]
Spring/Surface Water Monitoring Point EE-02 - East End Discharge Area Exit Pathway(e)			
Field measurements			
Conductivity (mS/cm)	0.41		n/a
Dissolved Oxygen (ppm)	7.4		n/a
pH (Std Unit)	7.2		n/a
Temperature (deg C)	16		30.5[1]
Turbidity (NTU)	23		1[2]

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Metals (mg/L)			
Aluminum	E0.44		(0.05, 0.2)[3]
Barium	0.032		2[1]
Boron	0.0078		n/a
Calcium	45		n/a
Cobalt	0.001		n/a
Copper	0.00097		1.3[2]
Iron	0.65		0.3[3]
Lead	0.0015		0.005[1]
Magnesium	28		n/a
Manganese	0.16		0.05[3]
Molybdenum	0.00017		n/a
Nickel	0.0011		0.1[1]
Phosphorous	0.032		n/a
Potassium	0.58		n/a
Silicon	2.6		n/a
Sodium	0.52		n/a
Strontium	0.024		n/a
Sulfur	1.3		n/a
Titanium	0.011		n/a
Uranium	0.00032		n/a
Zinc	0.0059		5[3]
Zirconium	0.00069		n/a

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Well 531 - Northwestern Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	1.1	1.0	n/a
Dissolved Oxygen (ppm)	3.5	5.1	n/a
pH (Std Unit)	8.7	8.7	n/a
RedOx (mV)	-260	0.0	n/a
Temperature (deg C)	17	20	30.5[1]
Turbidity (NTU)	1.0	1.0	1[2]
Metals (mg/L)			
Aluminum	0.38	0.71	(0.05, 0.2)[3]
Barium	0.049	0.062	2[1]
Boron	0.84	0.83	n/a
Calcium	4.1	9.0	n/a
Chromium	0.0014	<0.001	1[1]
Cobalt	0.00012	0.00031	n/a
Copper	0.0014	0.0045	1.3[2]
Iron	0.28	0.64	0.3[3]
Lead	<0.0005	0.0013	0.005[1]
Lithium	0.11	0.12	n/a
Magnesium	1.2	2.0	n/a
Manganese	0.0062	0.018	0.05[3]
Molybdenum	0.00012	0.00017	n/a
Nickel	0.0023	0.0046	0.1[1]
Phosphorous	0.022	0.052	n/a
Potassium	1.6	2.4	n/a

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Silicon	13	6.4	n/a
Sodium	200	220	n/a
Strontium	0.23	0.3	n/a
Sulfur	4.9	1.4	n/a
Thorium	0.00021	<0.0002	n/a
Titanium	0.0055	0.0072	n/a
Zinc	0.0088	0.01	5[3]
Zirconium	0.0013	0.00054	n/a
Radionuclides (pCi/L) (d)			
Beta activity	8.7*	U7.4*	50[2]
Semi-volatile organics (ug/L)			
Benzoic acid	J11	U21	n/a
Bis(2-ethylhexyl)phthalate	J4.0	J7.5	n/a
Diethyl phthalate	J4.5	J3.4	n/a
Volatile organics (ug/L)			
Benzene	U1.0	J0.37	5[1]
Toluene	U1.0	J0.65	1,000[1]
Total Xylene	U1.0	J0.32	10,000[1]
Well 535 - Northwestern Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	0.8	0.87	n/a
Dissolved Oxygen (ppm)	5.4	5.4	n/a
pH (Std Unit)	7.0	7.0	n/a
RedOx (mV)	-12	-43	n/a

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Temperature (deg C)	19	22	30.5[1]
Turbidity (NTU)	1.0	1.0	1[2]
Metals (mg/L)			
Aluminum	1.9	0.12	(0.05, 0.2)[3]
Arsenic	0.0034	<0.0015	0.01[1]
Barium	0.078	0.088	2[1]
Beryllium	0.00014	<0.0001	0.004[1]
Boron	0.023	0.033	n/a
Cadmium	0.00014	<0.00011	0.005[1]
Calcium	130	150	n/a
Chromium	0.0042	<0.001	1[1]
Cobalt	0.0019	0.00092	n/a
Copper	0.0035	0.003	1.3[2]
Iron	4.9	3.4	0.3[3]
Lead	0.011	0.001	0.005[1]
Lithium	0.0049	0.0031	n/a
Magnesium	10	12	n/a
Manganese	1.6	0.66	0.05[3]
Molybdenum	0.00038	0.00011	n/a
Nickel	0.0044	0.0062	0.1[1]
Phosphorous	0.058	<0.02	n/a
Potassium	1.5	1.3	n/a
Silicon	14	6.5	n/a
Sodium	4.6	6.7	n/a
Strontium	0.36	0.42	n/a
Sulfur	0.39	0.25	n/a
Thallium	0.00054	<0.0003	0.002[1]

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Thorium	0.00065	<0.0002	n/a
Titanium	0.018	0.003	n/a
Uranium	0.00018	0.00012	n/a
Zinc	0.089	0.021	5[3]
Zirconium	0.0012	<0.0005	n/a
Radionuclides (pCi/L) (d)			
Tritium	640*	450*	20,000[2]
Semi-volatile organics (ug/L)			
Benzoic acid	J12	U20	n/a
Diethyl phthalate	J5.4	J2.9	n/a
Spring/Surface Water Monitoring Point S-01 - Southern Discharge Area Exit Pathway(e)			
Field measurements			
Conductivity (mS/cm)	0.27		n/a
Dissolved Oxygen (ppm)	12		n/a
pH (Std Unit)	6.7		n/a
Temperature (deg C)	18		30.5[1]
Turbidity (NTU)	72		1[2]
Metals (mg/L)			
Aluminum	E0.46		(0.05, 0.2)[3]
Arsenic	0.0015		0.01[1]
Barium	0.032		2[1]
Boron	0.007		n/a
Calcium	34		n/a
Chromium	0.0013		1[1]
Cobalt	0.00072		n/a

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Copper	0.0013		1.3[2]
Iron	0.7		0.3[3]
Lead	0.0012		0.005[1]
Magnesium	16		n/a
Manganese	0.032		0.05[3]
Molybdenum	0.00019		n/a
Nickel	0.0013		0.1[1]
Phosphorous	0.024		n/a
Potassium	1.1		n/a
Silicon	4.1		n/a
Sodium	0.65		n/a
Strontium	0.029		n/a
Sulfur	0.9		n/a
Titanium	0.015		n/a
Uranium	0.00018		n/a
Zinc	0.0086		5[3]
Zirconium	0.00058		n/a
Radionuclides (pCi/L) (d)			
Tritium	220*		20,000[2]
Spring/Surface Water Monitoring Point S-02 - Southern Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	0.2	0.35	n/a
Dissolved Oxygen (ppm)	10	4.9	n/a
pH (Std Unit)	7.0	8.0	n/a

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Temperature (deg C)	16	21	30.5[1]
Turbidity (NTU)	16	24	1[2]
Metals (mg/L)			
Aluminum	E0.31	0.48	(0.05, 0.2)[3]
Arsenic	0.0015	<0.0015	0.01[1]
Barium	0.036	0.06	2[1]
Boron	0.0085	0.017	n/a
Calcium	21	38	n/a
Chromium	0.0014	<0.001	1[1]
Cobalt	0.00072	0.0023	n/a
Copper	0.00075	0.0033	1.3[2]
Iron	0.49	0.6	0.3[3]
Lead	0.0013	0.0053	0.005[1]
Magnesium	12	23	n/a
Manganese	0.057	0.31	0.05[3]
Molybdenum	0.00024	<0.0001	n/a
Nickel	0.00093	0.0034	0.1[1]
Phosphorous	<0.02	0.025	n/a
Potassium	0.69	1.1	n/a
Silicon	1.4	6.7	n/a
Sodium	0.55	0.68	n/a
Strontium	0.013	0.023	n/a
Sulfur	0.42	0.73	n/a
Thorium	0.00029	<0.0002	n/a
Titanium	0.0061	0.0053	n/a
Uranium	0.00015	0.00048	n/a
Zinc	0.0043	0.018	5[3]

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2007 (a) (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Radionuclides (pCi/L) (d)			
Beta activity	U-4.8	16*	50[2]

(a) Only parameters that are detected 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; "BJ" indicates that the analyte was detected in the associated lab blank and that the value was estimated at or below the analytical detection limit by the laboratory; "U" indicates that the analyte was not detected; "<" indicates that the compound was not detected at the reported value; and "E" indicates that the percent difference between the parent sample and its serial dilution's concentration exceeds 10%.

(c) 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.

(d) Individual radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected at or above MDA.

(e) Dry season sampling not performed because the location was dry at the time of sampling.

Table 2.2. Constituents detected in SNS groundwater, 2007 (a)

Parameter	N det/ N total	Min	Max	Avg	Standard error (b)
Spring S-1 - Discharge point east-southeast of SNS site					
Field measurements					
Conductivity	12/1	0.15	0.36	0.28	0.019
Dissolved Oxygen (ppm)	12/1	4.5	12	7.7	0.75
pH (Std Unit)	12/1	5.4	8.2	n/a	n/a
Temperature (deg C)	12/1	10	22	16	1.2
Turbidity	12/1	2.0	41	14	3.0
Spring S-2 - Discharge point south of SNS site					
Field measurements					
Conductivity	12/1	0.27	0.46	0.36	0.022
Dissolved Oxygen (ppm)	12/1	1.0	8.3	4.5	0.77
pH (Std Unit)	12/1	5.3	8.3	n/a	n/a
Temperature (deg C)	12/1	11	18	14	0.71
Turbidity	12/1	0.0	14	3.8	1.3
Radionuclides (pCi/L) (c)					
Beta activity	1/1	4.5*	4.5*	n/a	n/a
Spring S-3 - Discharge point south of SNS site					
Field measurements					
Conductivity	9/9	0.17	0.38	0.31	0.021
Dissolved Oxygen (ppm)	9/9	2.5	7.4	5.2	0.49
pH (Std Unit)	9/9	5.5	8.5	n/a	n/a
Temperature (deg C)	9/9	13	18	15	0.71
Turbidity	9/9	1.0	34	6.0	3.5
Radionuclides (pCi/L) (c)					
Beta activity	1/1	4.5*	4.5*	n/a	n/a

Table 2.2. Constituents detected in SNS groundwater, 2007 (a) (continued)

Parameter	N det/ N total	Min	Max	Avg	Standard error (b)
			Spring S-4 - Discharge point west-southwest of SNS site		
Field measurements					
Conductivity	12/1	0.09	0.46	0.25	0.037
Dissolved Oxygen (ppm)	12/1	5.4	12	8.7	0.58
pH (Std Unit)	12/1	6.2	8.9	n/a	n/a
Temperature (deg C)	12/1	9.1	21	15	1.2
Turbidity	12/1	0.0	9.0	2.5	0.75
			Spring S-5 - Discharge point north-northeast of SNS site		
Field measurements					
Conductivity	12/1	0.26	0.65	0.51	0.031
Dissolved Oxygen (ppm)	12/1	2.8	9.5	5.4	0.57
pH (Std Unit)	12/1	6.1	8.3	n/a	n/a
Temperature (deg C)	12/1	13	15	14	0.24
Turbidity	12/1	0.0	18	5.0	1.6
Radionuclides (pCi/L) (c)					
Alpha activity	1/1	24*	24*	n/a	n/a
Beta activity	1/1	23*	23*	n/a	n/a
			Spring SP-1 - Discharge point south of SNS site		
Field measurements					
Conductivity	12/1	0.2	0.32	0.27	0.011
Dissolved Oxygen (ppm)	12/1	7.7	11	8.8	0.29
pH (Std Unit)	12/1	5.3	8.7	n/a	n/a
Temperature (deg C)	12/1	9.5	19	15	0.97
Turbidity	12/1	1.0	21	6.7	1.8

Table 2.2. Constituents detected in SNS groundwater, 2007 (a) (continued)

Parameter	N det/ N total	Min	Max	Avg	Standard error (b)
Surface Water Point SW-1 - Discharge point east-southeast of SNS site					
Field measurements					
Conductivity	12/1	0.14	0.32	0.23	0.02
Dissolved Oxygen (ppm)	12/1	0.8	12	5.8	1.2
pH (Std Unit)	12/1	5.8	8.0	n/a	n/a
Temperature (deg C)	12/1	9.2	19	14	0.99
Turbidity	12/1	1.0	330	35	27

(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) Standard error of the mean.

(c) Individual and average radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected at or above MDA.

Table 2.3. Constituents detected in HFIR groundwater at ORNL, 2007

Parameter	February (wet season)	April	August (dry season)
Outfall 383 – Down-gradient NPDES outfall south of Building 7900			
Field measurements			
Dissolved oxygen (ppm)	10		
pH (Std Unit)	6.0		
Temperature (deg C)	6.8		
Radionuclides (pCi/L)[a]			
Tritium	14,000*		13,000*
Well 658 - Down-gradient well south of Building 7900			
Field measurements			
Conductivity (mS/cm)		0.76	
Dissolved oxygen (ppm)		1.2	
pH (Std Unit)		7.1	
RedOx (mV)		-14	
Temperature (deg C)		16	
Turbidity (NTU)		0.5	
Radionuclides (pCi/L)[a]			
Tritium		30,000*	
Well 892 - Down-gradient well located south of Building 7900 between Wells 658 and 661			
Field measurements			
Conductivity (mS/cm)		0.57	
Dissolved oxygen (ppm)		8.4	
pH (Std Unit)		7.1	
RedOx (mV)		-220	
Temperature (deg C)		19	
Turbidity (NTU)		18	
Radionuclides (pCi/L)[a]			
Tritium		160,000*	
CBMH - Down-gradient manhole south of Building 7900			
Field measurements			
Dissolved oxygen (ppm)	10		

Table 2.3. Constituents detected in HFIR groundwater at ORNL, 2007

Parameter	February (wet season)	April	August (dry season)
pH (Std Unit)	7.2		
Temperature (deg C)	13		
Radionuclides (pCi/L)[a]			
Tritium	16,000*		13,000*
J-1 - Down-gradient East Foundation Drain monitoring point southeast of Building 7900			
Field measurements			
Dissolved oxygen (ppm)	8.6		
pH (Std Unit)	7.0		
Temperature (deg C)	19		
Radionuclides (pCi/L)[a]			
Tritium	1,100*		5,400*

[a]Individual radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected at or above MDA.

Table 2.4. 2007 radionuclide concentrations in surface waters around ORNL

Parameter	N det/ N total	Concentration Min(a)	Concentration Max(a)	Concentration Avg(b)	Standard Error(c)	DCG(d)	Percent of DCG(e)
White Oak Creek Headwaters							
Alpha activity	12/12	3.0*	4.2*	3.6*	0.099	n/a	n/a
Beta activity	12/12	4.6*	6.4*	5.7*	0.19	n/a	n/a
Carbon-14	12/12	160*	290*	240*	13	70,000	0.34
Cesium-137	12/12	0.4*	7.5*	4.4*	0.51	3,000	0.15
Cobalt-60	12/12	0.38*	6.7*	4.5*	0.49	5,000	0.091
Tritium	12/12	340*	770*	500*	42	2,000,000	0.025

(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 at or above MDA

Table 2.5. 2007 Concentrations of parameters detected in stormwater at ORNL NPDES permitted locations

Parameter	Grab Sample Concentration (a)	Flow Proportional Sample Concentration (a)
	Outfall 033	
Metals (mg/L)		
Aluminum	0.15	0.086
Antimony	0.00098	0.0004
Arsenic	0.00029	0.00021
Beryllium	<0.0000038	0.0000083
Cadmium	0.000022	<0.0000038
Chromium	0.00056	0.00035
Cobalt	0.00013	0.00011
Copper	0.0013	0.00094
Iron	0.16	0.17
Lead	0.016	0.0016
Manganese	0.01	0.011
Molybdenum	0.00022	0.000095
Nickel	0.00076	0.0014
Phosphorous	J0.041	J0.037
Selenium	0.092	0.075
Silver	0.00021	0.000012
Strontium	0.13	0.13
Thallium	0.0000045	0.0000083
Thorium	0.000012	0.0000083
Uranium	0.00024	0.00025
Zinc	0.039	<0.038
Other		
Biochemical Oxygen Demand (BOD) (mg/L)	<4.0	<4.0
Chemical Oxygen Demand (COD) (mg/L)	J18	U6.4
Kjeldahl Nitrogen (mg/L)	J0.2	J0.074
Nitrate/Nitrite as Nitrogen (mg/L)	U0.014	U0.014
Suspended Solids	7.0	8.0
	Outfall 051	
Metals (mg/L)		
Aluminum	0.15	0.14
Antimony	0.0023	0.0036
Arsenic	0.0006	0.0008

Table 2.5. 2007 Concentrations of parameters detected in stormwater at ORNL NPDES permitted locations (continued)

Parameter	Grab Sample Concentration (a)	Flow Proportional Sample Concentration (a)
Beryllium	0.0000083	0.000011
Cadmium	0.000026	0.000086
Chromium	0.00053	0.00065
Cobalt	0.0002	0.0003
Copper	0.0016	0.003
Iron	0.23	0.21
Lead	0.0022	0.023
Manganese	0.074	0.073
Molybdenum	0.00094	0.0017
Nickel	0.0008	0.0015
Phosphorous	J0.049	0.072
Selenium	0.19	0.22
Silver	0.000083	0.00027
Strontium	0.14	0.15
Thallium	0.000017	0.00002
Thorium	0.000013	0.000011
Uranium	0.00039	0.00038
Zinc	<0.038	<0.038
Other		
Biochemical Oxygen Demand (BOD) (mg/L)	<4.0	<4.0
Chemical Oxygen Demand (COD) (mg/L)	J11	U6.4
Kjeldahl Nitrogen (mg/L)	J0.21	J0.2
Nitrate/Nitrite as Nitrogen (mg/L)	U0.014	U0.014
Suspended Solids	<1.0	6.0
Semi-volatile organics (ug/L)		
1,2,4-Trichlorobenzene	U10	
1,2-Diphenylhydrazine	U10	
2,4,6-Trichlorophenol	U10	
2,4-Dichlorophenol	U10	
2,4-Dimethylphenol	U10	
2,4-Dinitrophenol	U20	
2,4-Dinitrotoluene	U10	
2,6-Dinitrotoluene	U10	
2-Chloronaphthalene	U1.0	
2-Chlorophenol	U10	
2-Methyl-4,6-dinitrophenol	U10	
2-Nitrophenol	U10	

Table 2.5. 2007 Concentrations of parameters detected in stormwater at ORNL NPDES permitted locations (continued)

Parameter	Grab Sample Concentration (a)	Flow Proportional Sample Concentration (a)
3,3'-Dichlorobenzidine	U10	
4-Bromophenyl phenyl ether	U10	
4-Chloro-3-methylphenol	U10	
4-Chlorophenyl phenyl ether	U10	
4-Nitrophenol	U10	
Acenaphthene	U1.0	
Acenaphthylene	U1.0	
Anthracene	U1.0	
Benz(a)anthracene	U1.0	
Benzidine	U10	
Benzo(a)pyrene	U1.0	
Benzo(b)fluoranthene	U1.0	
Benzo(ghi)perylene	U1.0	
Benzo(k)fluoranthene	U1.0	
Bis(2-chloroethoxy)methane	U10	
Bis(2-chloroethyl) ether	U10	
Bis(2-chloroisopropyl) ether	U10	
Bis(2-ethylhexyl)phthalate	U10	
Butyl benzyl phthalate	U10	
Chrysene	U1.0	
Dibenz(a,h)anthracene	U1.0	
Diethyl phthalate	U10	
Dimethyl phthalate	U10	
Di-n-butyl phthalate	U10	
Di-n-octylphthalate	U10	
Fluoranthene	U1.0	
Fluorene	U1.0	
Hexachlorobenzene	U10	
Hexachlorobutadiene	U10	
Hexachlorocyclopentadiene	U10	
Hexachloroethane	U10	
Indeno(1,2,3-cd)pyrene	U1.0	
Isophorone	U10	
Naphthalene	U1.0	
Nitrobenzene	U10	
N-Nitrosodimethylamine	U10	
N-Nitroso-di-n-propylamine	U10	

Table 2.5. 2007 Concentrations of parameters detected in stormwater at ORNL NPDES permitted locations (continued)

Parameter	Grab Sample Concentration (a)	Flow Proportional Sample Concentration (a)
N-Nitrosodiphenylamine	U10	
Pentachlorophenol	U10	
Phenanthrene	U1.0	
Phenol	U10	
Pyrene	U1.0	
Volatile organics (ug/L)		
1,2-Dichlorobenzene	U10	
1,3-Dichlorobenzene	U10	
1,4-Dichlorobenzene	U10	
Outfall 070		
Metals (mg/L)		
Aluminum	0.13	0.11
Antimony	0.0011	0.0014
Arsenic	0.00032	0.00032
Beryllium	0.0000068	0.0000083
Cadmium	0.00019	0.00019
Chromium	0.001	0.00088
Cobalt	0.00021	0.00019
Copper	0.0047	0.0042
Iron	0.13	0.14
Lead	0.0072	0.012
Manganese	0.01	0.012
Molybdenum	0.0029	0.0029
Nickel	0.0059	0.0012
Phosphorous	0.051	0.056
Selenium	0.12	0.13
Silver	0.00012	0.00012
Strontium	0.072	0.068
Thallium	0.000012	0.000011
Thorium	0.000009	0.000009
Uranium	0.00013	0.00013
Zinc	<0.038	<0.038
Other		
Biochemical Oxygen Demand (BOD) (mg/L)	4.1	<4.0
Chemical Oxygen Demand (COD) (mg/L)	J8.2	J8.2
Kjeldahl Nitrogen (mg/L)	J0.21	J0.22

Table 2.5. 2007 Concentrations of parameters detected in stormwater at ORNL NPDES permitted locations (continued)

Parameter	Grab Sample Concentration (a)	Flow Proportional Sample Concentration (a)
Nitrate/Nitrite as Nitrogen (mg/L)	U0.014	U0.014
Suspended Solids	3.0	4.0
Outfall 102		
Metals (mg/L)		
Aluminum	0.24	0.26
Antimony	0.00089	0.00085
Arsenic	0.00034	0.00032
Beryllium	0.000017	0.000012
Cadmium	0.000048	0.000036
Chromium	0.00079	0.00096
Cobalt	0.00013	0.00013
Copper	0.004	0.0061
Iron	0.28	0.23
Lead	0.0027	0.0074
Manganese	0.009	0.0084
Molybdenum	0.0004	0.00042
Nickel	0.0017	0.0029
Phosphorous	0.071	0.051
Selenium	0.09	0.088
Silver	0.00008	0.000073
Strontium	0.077	0.074
Thallium	0.000019	0.000016
Thorium	0.000038	0.000036
Uranium	0.0013	0.0013
Zinc	<0.038	<0.038
Other		
Biochemical Oxygen Demand (BOD) (mg/L)	<4.0	<4.0
Chemical Oxygen Demand (COD) (mg/L)	J8.2	J11
Kjeldahl Nitrogen (mg/L)	J0.23	J0.23
Nitrate/Nitrite as Nitrogen (mg/L)	U0.014	U0.014
Sum of Total Toxic Organics Analysis	<20	
Suspended Solids	4.0	2.0
Semi-volatile organics (ug/L)		
1,2,4-Trichlorobenzene	U10	
1,2-Diphenylhydrazine	U10	
2,4,6-Trichlorophenol	U10	

Table 2.5. 2007 Concentrations of parameters detected in stormwater at ORNL NPDES permitted locations (continued)

Parameter	Grab Sample Concentration (a)	Flow Proportional Sample Concentration (a)
2,4-Dichlorophenol	U10	
2,4-Dimethylphenol	U10	
2,4-Dinitrophenol	U20	
2,4-Dinitrotoluene	U10	
2,6-Dinitrotoluene	U10	
2-Chloronaphthalene	U1.0	
2-Chlorophenol	U10	
2-Methyl-4,6-dinitrophenol	U10	
2-Nitrophenol	U10	
3,3'-Dichlorobenzidine	U10	
4-Bromophenyl phenyl ether	U10	
4-Chloro-3-methylphenol	U10	
4-Chlorophenyl phenyl ether	U10	
4-Nitrophenol	U10	
Acenaphthene	U1.0	
Acenaphthylene	U1.0	
Anthracene	U1.0	
Benz(a)anthracene	U1.0	
Benzidine	U10	
Benzo(a)pyrene	U1.0	
Benzo(b)fluoranthene	U1.0	
Benzo(ghi)perylene	U1.0	
Benzo(k)fluoranthene	U1.0	
Bis(2-chloroethoxy)methane	U10	
Bis(2-chloroethyl) ether	U10	
Bis(2-chloroisopropyl) ether	U10	
Bis(2-ethylhexyl)phthalate	U10	
Butyl benzyl phthalate	U10	
Chrysene	U1.0	
Dibenz(a,h)anthracene	U1.0	
Diethyl phthalate	U10	
Dimethyl phthalate	U10	
Di-n-butyl phthalate	U10	
Di-n-octylphthalate	U10	
Fluoranthene	U1.0	
Fluorene	U1.0	
Hexachlorobenzene	U10	

Table 2.5. 2007 Concentrations of parameters detected in stormwater at ORNL NPDES permitted locations (continued)

Parameter	Grab Sample Concentration (a)	Flow Proportional Sample Concentration (a)
Hexachlorobutadiene	U10	
Hexachlorocyclopentadiene	U10	
Hexachloroethane	U10	
Indeno(1,2,3-cd)pyrene	U1.0	
Isophorone	U10	
Naphthalene	U1.0	
Nitrobenzene	U10	
N-Nitrosodimethylamine	U10	
N-Nitroso-di-n-propylamine	U10	
N-Nitrosodiphenylamine	U10	
Pentachlorophenol	U10	
Phenanthrene	U1.0	
Phenol	U10	
Pyrene	U1.0	
Volatile organics (ug/L)		
1,2-Dichlorobenzene	U10	
1,3-Dichlorobenzene	U10	
1,4-Dichlorobenzene	U10	
Outfall 250		
Metals (mg/L)		
Aluminum	0.079	0.12
Antimony	0.00051	0.00062
Arsenic	0.0002	0.00019
Beryllium	<0.0000038	<0.0000038
Cadmium	0.00028	0.00025
Chromium	0.00017	0.0002
Cobalt	0.000087	0.000073
Copper	0.024	0.023
Iron	0.034	0.034
Lead	0.0069	0.0043
Manganese	0.0066	0.066
Molybdenum	0.00011	0.00014
Nickel	0.0022	0.00064
Phosphorous	0.052	0.061
Selenium	0.03	0.034
Silver	0.00007	0.000045

Table 2.5. 2007 Concentrations of parameters detected in stormwater at ORNL NPDES permitted locations (continued)

Parameter	Grab Sample Concentration (a)	Flow Proportional Sample Concentration (a)
Strontium	0.011	0.011
Thallium	0.000017	0.000016
Thorium	<0.0000038	<0.0000038
Uranium	0.000014	0.000014
Zinc	0.49	0.48
Other		
Asbestos (MFL)	<0.18	<0.18
Biochemical Oxygen Demand (BOD) (mg/L)	<4.0	<4.0
Chemical Oxygen Demand (COD) (mg/L)	U6.4	U6.4
Kjeldahl Nitrogen (mg/L)	J0.23	J0.21
Nitrate/Nitrite as Nitrogen (mg/L)	U0.014	U0.014
Suspended Solids	2.0	1.0
Pesticides and PCBs (ug/L)		
4,4'-DDD	U0.041	
4,4'-DDE	U0.041	
4,4'-DDT	U0.041	
Aldrin	U0.02	
alpha-BHC	U0.02	
beta-BHC	U0.02	
delta-BHC	U0.02	
Dieldrin	U0.041	
Endosulfan I	U0.02	
Endosulfan II	U0.041	
Endosulfan sulfate	U0.041	
Endrin	U0.041	
Endrin aldehyde	U0.041	
Heptachlor	U0.02	
Heptachlor epoxide	U0.02	
Lindane	U0.02	
PCB-1016	U0.51	
PCB-1221	U0.51	
PCB-1232	U0.51	
PCB-1242	U0.51	
PCB-1248	U0.51	
PCB-1254	U0.51	

Table 2.5. 2007 Concentrations of parameters detected in stormwater at ORNL NPDES permitted locations (continued)

Parameter	Grab Sample Concentration (a)	Flow Proportional Sample Concentration (a)
PCB-1260	U0.51	
Polychlorinated biphenyl	U0.51	

(a) 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 "<" indicates the value for a parameter was not quantifiable at the analytical detection limit.

Table 2.6. 2007 radionuclide concentrations at ORNL NPDES permitted locations

Parameter	N det/ N total	Concentration Min(a)	Concentration Max(a)	Concentration Avg(b)	Standard Error(c)	DCG(d)	Percent of DCG(e)
			Sewage Treatment Plant (X01)				
Alpha activity	12/12	3.0*	3.9*	3.5*	0.088	n/a	n/a
Beta activity	12/12	150*	370*	240*	20	n/a	n/a
Carbon-14	12/12	160*	290*	240*	13	70,000	0.34
Cesium-137	12/12	4.1*	15*	7.0*	0.82	3,000	0.23
Cobalt-60	12/12	3.8*	6.6*	4.7*	0.32	5,000	0.094
Strontium-89/90	12/12	63*	140*	97*	7.5	1,000	9.7
Tritium	12/12	340*	14,000*	2,100*	1,100	2,000,000	0.11
			Coal Yard Runoff Treatment Facility (X02)				
Alpha activity	12/12	24*	50*	37*	2.3	n/a	n/a
Beta activity	12/12	390*	910*	580*	46	n/a	n/a
Potassium-40	1/1	390*	390*	390	n/a	7,000	5.6
Strontium-89/90	1/1	120*	120*	120	n/a	1,000	12
			Process Waste Treatment Complex (X12)				
Alpha activity	12/12	3.7*	21*	10*	1.7	n/a	n/a
Beta activity	12/12	73*	770*	430*	86	n/a	n/a
Cesium-137	12/12	28*	870*	380*	86	3,000	13
Cobalt-60	12/12	5.5*	7.2*	6.5*	0.15	5,000	0.13
Strontium-89/90	12/12	16*	85*	52*	8.2	1,000	5.2
Tritium	12/12	240,000*	360,000*	300,000*	11,000	2,000,000	15
Uranium-233/234	12/12	5.2*	25*	12*	1.9	500	2.4
Uranium-235	11/12	0.13*	2.1*	0.64*	0.19	600	0.11
Uranium-236	12/12	0.18*	2.2*	0.86*	0.22	500	0.17
Uranium-238	12/12	0.21*	1.6*	0.94*	0.14	600	0.16
			Melton Branch 1 (X13)				
Alpha activity	12/12	3.3*	4.6*	3.9*	0.13	n/a	n/a
Beta activity	12/12	64*	220*	110*	14	n/a	n/a
Cesium-137	12/12	2.8*	5.6*	4.8*	0.25	3,000	0.16

Table 2.6. 2007 radionuclide concentrations at ORNL NPDES permitted locations (continued)

Parameter	N det/ N total	Concentration Min(a)	Concentration Max(a)	Concentration Avg(b)	Standard Error(c)	DCG(d)	Percent of DCG(e)
Cobalt-60	12/12	3.9*	5.9*	5.3*	0.22	5,000	0.11
Strontium-89/90	12/12	22*	98*	44*	7.2	1,000	4.4
Tritium	12/12	11,000*	31,000*	17,000*	1,500	2,000,000	0.86
White Oak Creek (X14)							
Alpha activity	12/12	2.9*	4.1*	3.6*	0.12	n/a	n/a
Beta activity	12/12	61*	97*	80*	2.7	n/a	n/a
Cesium-137	12/12	7.0*	42*	17*	2.7	3,000	0.57
Cobalt-60	12/12	3.8*	4.7*	4.3*	0.097	5,000	0.085
Strontium-89/90	12/12	24*	32*	28*	0.85	1,000	2.8
Tritium	12/12	18,000*	41,000*	29,000*	2,000	2,000,000	1.4
White Oak Dam (X15)							
Alpha activity	12/12	3.8*	6.0*	4.4*	0.21	n/a	n/a
Beta activity	12/12	110*	260*	150*	12	n/a	n/a
Cesium-137	12/12	9.4*	170*	37*	13	3,000	1.2
Cobalt-60	12/12	3.8*	7.0*	5.3*	0.34	5,000	0.11
Strontium-89/90	12/12	40*	64*	49*	2.2	1,000	4.9
Tritium	12/12	17,000*	34,000*	26,000*	1,500	2,000,000	1.3
Outfall 001							
Alpha activity	1/1	3.5*	3.5*	3.5	n/a	n/a	n/a
Beta activity	1/1	6.0*	6.0*	6.0	n/a	n/a	n/a
Outfall 080							
Alpha activity	2/2	250*	310*	280*	30	n/a	n/a
Americium-241	2/2	4.3*	8.2*	6.3	2.0	30	21
Beta activity	2/2	110*	520*	320	210	n/a	n/a
Cesium-137	2/2	11*	17*	14	3.0	3,000	0.47
Cobalt-60	2/2	3.9*	3.9*	3.9	0.0	5,000	0.078
Curium-243/244	2/2	210*	290*	250	40	50	500
Plutonium-238	2/2	0.82*	1.2*	1.0	0.19	40	2.5

Table 2.6. 2007 radionuclide concentrations at ORNL NPDES permitted locations (continued)

Parameter	N det/ N total	Concentration Min(a)	Concentration Max(a)	Concentration Avg(b)	Standard Error(c)	DCG(d)	Percent of DCG(e)
Plutonium-239/240	2/2	2.8*	3.8*	3.3*	0.5	30	11
Strontium-89/90	2/2	33*	210*	120	89	1,000	12
Tritium	2/2	580*	900*	740	160	2,000,000	0.037
Outfall 081							
Alpha activity	1/1	3.7*	3.7*	3.7	n/a	n/a	n/a
Beta activity	1/1	4.9*	4.9*	4.9	n/a	n/a	n/a
Outfall 085							
Alpha activity	4/4	8.9*	15*	12*	1.3	n/a	n/a
Beta activity	4/4	180*	270*	230*	22	n/a	n/a
Strontium-89/90	4/4	96*	130*	110*	8.1	1,000	11
Uranium-233/234	4/4	6.9*	13*	9.8*	1.3	500	2.0
Uranium-235	3/4	0.12*	0.72	0.41*	0.12	600	0.068
Uranium-236	4/4	0.17*	0.8*	0.48*	0.13	500	0.096
Uranium-238	4/4	1.3*	2.2*	1.8*	0.2	600	0.3
Outfall 087							
Alpha activity	1/1	4.0*	4.0*	4.0	n/a	n/a	n/a
Beta activity	1/1	50*	50*	50	n/a	n/a	n/a
Cesium-137	1/1	4.4*	4.4*	4.4	n/a	3,000	0.15
Cobalt-60	1/1	3.9*	3.9*	3.9	n/a	5,000	0.078
Outfall 204							
Alpha activity	4/4	3.6*	6.1*	5.0*	0.56	n/a	n/a
Beta activity	4/4	120*	330*	200*	49	n/a	n/a
Strontium-89/90	4/4	37*	120*	69*	20	1,000	6.9
Outfall 207							
Alpha activity	4/4	3.6*	6.3*	4.5*	0.61	n/a	n/a
Beta activity	4/4	14*	40*	25*	6.3	n/a	n/a
Cesium-137	4/4	3.8*	6.9*	5.1*	0.66	3,000	0.17

Table 2.6. 2007 radionuclide concentrations at ORNL NPDES permitted locations (continued)

Parameter	N det/ N total	Concentration Min(a)	Concentration Max(a)	Concentration Avg(b)	Standard Error(c)	DCG(d)	Percent of DCG(e)
Cobalt-60	4/4	3.8*	6.9*	4.8*	0.71	5,000	0.096
Strontium-89/90	4/4	5.2*	20*	14*	3.4	1,000	1.4
Outfall 211							
Alpha activity	4/4	1.8*	4.0*	3.2*	0.47	n/a	n/a
Beta activity	4/4	4.8*	8.1*	6.3*	0.68	n/a	n/a
Strontium-89/90	4/4	3.1*	3.6*	3.4*	0.12	1,000	0.34
Outfall 217							
Alpha activity	1/1	4.0*	4.0*	4.0	n/a	n/a	n/a
Beta activity	1/1	5.1*	5.1*	5.1	n/a	n/a	n/a
Outfall 219							
Alpha activity	1/1	3.4*	3.4*	3.4	n/a	n/a	n/a
Beta activity	1/1	4.7*	4.7*	4.7	n/a	n/a	n/a
Outfall 234							
Alpha activity	1/1	3.7*	3.7*	3.7	n/a	n/a	n/a
Beta activity	1/1	4.9*	4.9*	4.9	n/a	n/a	n/a
Outfall 241							
Alpha activity	1/1	17*	17*	17	n/a	n/a	n/a
Beta activity	1/1	150*	150*	150	n/a	n/a	n/a
Outfall 265							
Alpha activity	1/1	4.2*	4.2*	4.2	n/a	n/a	n/a
Beta activity	1/1	16*	16*	16	n/a	n/a	n/a
Cesium-137	1/1	7.7*	7.7*	7.7	n/a	3,000	0.26
Cobalt-60	1/1	6.6*	6.6*	6.6	n/a	5,000	0.13
Outfall 281							
Alpha activity	4/4	2.5*	18*	6.7	3.8	n/a	n/a
Beta activity	4/4	7.3*	28*	14*	4.8	n/a	n/a
Cesium-137	4/4	4.5*	7.1*	5.3*	0.61	3,000	0.18

Table 2.6. 2007 radionuclide concentrations at ORNL NPDES permitted locations (continued)

Parameter	N det/ N total	Concentration Min(a)	Concentration Max(a)	Concentration Avg(b)	Standard Error(c)	DCG(d)	Percent of DCG(e)
Cobalt-60	4/4	5.6*	6.8*	6.1*	0.26	5,000	0.12
Tritium	4/4	580*	720*	680*	33	2,000,000	0.034
Outfall 282							
Alpha activity	4/4	2.5*	3.7*	3.2*	0.28	n/a	n/a
Beta activity	4/4	7.8*	20*	11*	3.0	n/a	n/a
Outfall 302							
Alpha activity	12/12	3.1*	9.9*	5.3*	0.69	n/a	n/a
Beta activity	12/12	92*	1,800*	350*	140	n/a	n/a
Cesium-137	12/12	7.9*	300*	57*	23	3,000	1.9
Cobalt-60	12/12	3.7*	7.0*	4.7*	0.36	5,000	0.094
Strontium-89/90	12/12	37*	850*	140*	65	1,000	14
Tritium	12/12	3,200*	57,000*	35,000*	5,300	2,000,000	1.7
Uranium-233/234	1/1	7.7*	7.7*	7.7	n/a	500	1.5
Uranium-235	1/1	0.68*	0.68*	0.68	n/a	600	0.11
Uranium-236	1/1	0.58*	0.58*	0.58	n/a	500	0.12
Uranium-238	1/1	0.93*	0.93*	0.93	n/a	600	0.16
Outfall 304							
Alpha activity	12/12	2.8*	18*	8.5*	1.6	n/a	n/a
Beta activity	12/12	29*	1,200*	620*	110	n/a	n/a
Cesium-137	12/12	4.4*	300*	99*	26	3,000	3.3
Cobalt-60	12/12	4.1*	6.8*	6.0*	0.21	5,000	0.12
Strontium-89/90	12/12	11*	540*	250*	44	1,000	25
Tritium	12/12	360*	13,000*	2,000*	1,100	2,000,000	0.1
Uranium-233/234	2/2	6.1*	11*	8.6	2.5	500	1.7
Uranium-235	2/2	0.27*	0.65*	0.46	0.19	600	0.077
Uranium-236	2/2	0.26*	1.3*	0.78	0.52	500	0.16
Uranium-238	2/2	2.7*	5.3*	4.0	1.3	600	0.67

Table 2.6. 2007 radionuclide concentrations at ORNL NPDES permitted locations (continued)

Parameter	N det/ N total	Concentration Min(a)	Max(a)	Avg(b)	Standard Error(c)	DCG(d)	Percent of DCG(e)
			Outfall 365				
Alpha activity	4/4	2.6*	4.2*	3.6*	0.35	n/a	n/a
Beta activity	4/4	21*	40*	28*	4.1	n/a	n/a
			Outfall 368				
Alpha activity	4/4	2.0*	3.9*	3.1*	0.41	n/a	n/a
Beta activity	4/4	4.8*	43*	15	9.4	n/a	n/a
Cesium-137	4/4	3.8*	5.2*	4.6*	0.3	3,000	0.15
Cobalt-60	4/4	2.7*	5.8*	4.4*	0.67	5,000	0.088
			Outfall 383				
Alpha activity	1/1	3.1*	3.1*	3.1	n/a	n/a	n/a
Beta activity	1/1	4.9*	4.9*	4.9	n/a	n/a	n/a
Tritium	1/1	440*	440*	440	n/a	2,000,000	0.022

(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 at or above MDA.

Table 2.7. 2007 analyses for ORNL reference surface waters

Parameter	N det/ N total	Concentration 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	0.17	0.34	0.27	0.0069	n/a	n/a
Dissolved Oxygen (mg/L)	52/52	6.8	11	8.2	0.15	5	170
pH (Std Unit)	52/52	7.1	8.2	n/a	0.028	n/a	n/a
Temperature (deg C)	52/52	4.5	21	14	0.59	n/a	n/a
Turbidity (NTU)	52/52	2.0	40	6.1	0.81	n/a	n/a
Metals (mg/L)							
Antimony	0/12	<0.00081	<0.005	~0.0014	0.00036	n/a	n/a
Arsenic	4/12	0.00017	0.0013	0.00085	0.0001	0.34	0.25
Beryllium	0/12	<0.000041	<0.00069	~0.00053	0.000082	n/a	n/a
Cadmium	0/12	<0.00006	<0.00078	~0.00061	0.000091	0.002	30
Chromium	9/12	0.00081	0.0038	0.0017	0.00028	n/a	n/a
Cobalt	7/12	0.0001	0.0023	0.00092	0.00019	n/a	n/a
Copper	7/12	<0.001	<0.015	~0.0038	0.0011	0.013	30
Iron	12/12	0.065	1.3	0.44	0.12	n/a	n/a
Lead	4/12	<0.001	0.0029	~0.0016	0.00021	0.065	2.4
Manganese	12/12	0.012	0.34	0.081	0.029	n/a	n/a
Mercury (f)	0/4	<0.000082	<0.00015	~0.00013	0.000018	0.0014	9.6
Molybdenum	5/12	0.00024	0.0015	0.00093	0.00011	n/a	n/a
Nickel	6/12	<0.0014	0.0081	~0.0029	0.00065	0.47	0.61
Selenium	3/12	<0.04	0.15	~0.059	0.012	0.02	300
Silver	0/12	<0.000064	<0.00062	~0.00049	0.000069	0.0032	15
Strontium	12/12	0.031	0.052	0.042	0.0018	n/a	n/a
Thallium	0/12	<0.00012	<0.00083	~0.00067	0.000087	n/a	n/a
Thorium	6/12	0.000013	0.00029	0.000088	0.00002	n/a	n/a

Table 2.7. 2007 analyses for ORNL reference surface waters

Parameter	N det/ N total	Concentration			Standard Error(c)	Ref. Value(d)	Percent of Ref. Value(e)
		Min(a)	Max(a)	Avg(b)			
Uranium	12/12	0.00015	0.00047	0.0003	0.000035	n/a	n/a
Zinc	5/12	<0.02	<0.2	~0.058	0.017	0.12	48

(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.
(f) Sampled quarterly.

Table 2.8. NPDES Permit Number TN0002941, 2007 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)	16/16	0.1	14	3.3	0.84
pH (StdUnit)	16/16	6.7	8.2	n/a	n/a
Temperature (degC)	16/16	3.6	47	20	3.5
Category 2 outfalls					
Field measurements					
Flow (gpm)	18/18	0.1	15	3.7	1.2
pH (StdUnit)	18/18	6.8	7.9	n/a	n/a
Temperature (degC)	18/18	3.2	24	12	2.1
Category 3 outfalls					
Field measurements					
Flow (gpm)	53/53	0.1	65	8.7	1.6
pH (StdUnit)	53/53	6.8	8.0	n/a	n/a
Temperature (degC)	53/53	5.0	23	17	0.59
Category 4 outfalls					
Field measurements					
Flow (gpm)	335/335	0.1	500	49	3.8
pH (StdUnit)	335/335	7.0	8.3	n/a	n/a
Temperature (degC)	335/335	3.5	35	19	0.26
Cooling Tower Blowdown outfalls					
Field measurements					
Flow (gpm)	4/4	5.0	15	8.8	2.2
pH (StdUnit)	4/4	7.9	8.5	n/a	n/a
Temperature (degC)	4/4	23	27	25	0.73
Total Residual Oxidant (mg/L)	0/4	<0.05	<0.05	~0.05	0.0
Physical					
Suspended Solids (mg/L)	4/4	6.0	91	34	20

Table 2.8. NPDES Permit Number TN0002941, 2007 ORNL outfall monitoring (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)	49/49	0.25	180	56	5.3
pH (StdUnit)	49/49	7.0	8.2	n/a	n/a
Temperature (degC)	49/49	10	28	21	0.69
Total Residual Oxidant (mg/L)	0/49	<0.05	<0.05	~0.05	0.0
Groundwater/Pumpwater outfalls					
Field measurements					
Flow (gpm)	6/6	0.1	0.1	0.1	0.0
pH (StdUnit)	6/6	7.3	8.1	n/a	n/a
Temperature (degC)	6/6	14	27	18	2.0
Steam Condensate outfalls					
Field measurements					
Flow (gpm)	16/16	0.1	0.25	0.14	0.017
pH (StdUnit)	16/16	7.2	8.1	n/a	n/a
Temperature (degC)	16/16	19	58	43	3.6

(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 2.9. NPDES Permit Number TN0002941, 2007 ORNL Instream Chlorine monitoring

Parameter	N det/ N total	Concentration Min(a)	Max(a)	Avg(b)	Standard error(c)
		First Creek			
Field measurements					
pH (StdUnit)	48/48	7.3	8.1	n/a	0.026
Temperature (degC)	48/48	6.5	21	15	0.64
Total Residual Oxidant (mg/L)	0/48	<0.05	<0.05	~0.05	0.0
		Fifth Creek			
Field measurements					
pH (StdUnit)	72/72	7.3	8.0	n/a	0.02
Temperature (degC)	72/72	7.9	23	16	0.5
Total Residual Oxidant (mg/L)	0/72	<0.05	<0.05	~0.05	0.0
		White Oak Creek			
Field measurements					
pH (StdUnit)	144/144	7.0	8.1	n/a	0.02
Temperature (degC)	144/144	7.4	23	17	0.4
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 2.10. Surface water analyses (2007) 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	8.3	8.9	8.6	0.3	n/a
pH (Std Unit)	2/2	7.2	8.2	n/a	n/a	n/a
Temperature (deg C)	2/2	12	17	15	2.4	n/a
Radionuclides (pCi/L) (f)						
Alpha activity	2/2	3.7*	30*	17	13	n/a
Beta activity	2/2	40*	180*	110	71	n/a
Strontium-89/90	2/2	16*	96*	56	40	40
Uranium-233/234	2/2	2.7*	13*	7.8	5.0	20
Uranium-235/236	1/2	0.0	0.14*	0.069	0.069	n/a
Uranium-238	1/2	0.0	0.87*	0.44	0.44	24
Bear Creek downstream from Y-12 Complex inputs (BCK 0.6) (g)						
Field measurements						
Dissolved Oxygen (ppm)	1/1	9.8	9.8	n/a	n/a	5
pH (Std Unit)	1/1	8.2	8.2	n/a	n/a	n/a
Temperature (deg C)	1/1	12	12	n/a	n/a	30.5
East Fork Poplar Creek prior to entering Poplar Creek (EFK 0.1) (g)						
Field measurements						
Dissolved Oxygen (ppm)	1/1	6.6	6.6	n/a	n/a	5
pH (Std Unit)	1/1	8.1	8.1	n/a	n/a	n/a
Temperature (deg C)	1/1	11	11	n/a	n/a	30.5
Radionuclides (pCi/L) (f)						
Beta activity	1/1	2.5*	2.5*	n/a	n/a	n/a

Table 2.10. Surface water analyses (2007) at ORNL Environmental Monitoring Plan surface water locations (a) (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) (g)						
Field measurements						
Dissolved Oxygen (ppm)	1/1	8.1	8.1	n/a	n/a	5
pH (Std Unit)	1/1	7.9	7.9	n/a	n/a	n/a
Temperature (deg C)	1/1	12	12	n/a	n/a	30.5
Fifth Creek just upstream of White Oak Creek at ORNL (FIFTHCK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	8.0	8.9	8.5	0.45	n/a
pH (Std Unit)	2/2	7.0	8.2	n/a	n/a	n/a
Temperature (deg C)	2/2	14	18	16	2.4	n/a
Radionuclides (pCi/L) (f)						
Beta activity	2/2	36*	52*	44	8.0	n/a
Strontium-89/90	2/2	19*	21*	20*	1.1	40
Tritium	1/2	U150*	220*	~180	37	80,000
Grassy Creek upstream of SEG and IT Corp. (GCK 3.6)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	8.2	10	9.2	1.0	n/a
pH (Std Unit)	2/2	8.0	8.7	n/a	n/a	n/a
Temperature (deg C)	2/2	10	15	13	2.3	n/a
Metals (mg/L)						
Aluminum	2/2	E0.2	E0.45	~0.33	0.13	n/a
Arsenic	1/2	<0.0015	0.0015	~0.0015	0.0	n/a
Barium	2/2	0.028	0.03	0.029	0.001	n/a
Boron	2/2	0.0042	0.01	0.0071	0.0029	n/a
Calcium	2/2	23	30	27	3.6	n/a

Table 2.10. Surface water analyses (2007) at ORNL Environmental Monitoring Plan surface water locations (a) (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Cobalt	2/2	0.00024	0.00026	0.00025	0.00001	n/a
Copper	2/2	0.00051	0.0007	0.00061	0.000095	n/a
Iron	2/2	0.25	0.27	0.26	0.01	n/a
Magnesium	2/2	9.9	19	15	4.6	n/a
Manganese	2/2	0.03	0.04	0.035	0.005	n/a
Nickel	2/2	0.00081	0.00096	0.00089	0.000075	n/a
Potassium	2/2	0.78	0.97	0.88	0.095	n/a
Sodium	2/2	0.49	2.1	1.3	0.81	n/a
Strontium	2/2	0.016	0.036	0.026	0.01	n/a
Sulfur	2/2	0.4	1.5	0.95	0.55	n/a
Titanium	2/2	0.0029	0.0036	0.0033	0.00035	n/a
Uranium	2/2	0.00012	0.00029	0.00021	0.000085	n/a
Zinc	2/2	0.0034	0.0036	0.0035	0.0001	n/a
Radionuclides (pCi/L) (f)						
Alpha activity	1/2	U-0.056	1.8*	~0.88	0.94	n/a
Ish Creek prior to entering CRK 30.8 (ICK 0.7)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	6.8	10	8.5	1.7	n/a
pH (Std Unit)	2/2	7.5	8.6	n/a	n/a	n/a
Temperature (deg C)	2/2	9.8	14	12	2.3	n/a
McCoy Branch prior to entering CRK 60.3 (McCBK 1.8)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	6.2	6.6	6.4	0.2	n/a
pH (Std Unit)	2/2	7.2	7.9	n/a	n/a	n/a
Temperature (deg C)	2/2	9.3	21	15	5.7	n/a

Table 2.10. Surface water analyses (2007) at ORNL Environmental Monitoring Plan surface water locations (a) (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Melton Branch downstream from ORNL (MEK 0.2)						
Field measurements						
Dissolved Oxygen (ppm)	6/6	5.5	11	8.5	0.82	5
pH (Std Unit)	6/6	7.5	8.0	n/a	n/a	n/a
Temperature (deg C)	6/6	8.7	25	16	2.6	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	4/6	U0.96	4.6*	~2.4*	0.54	n/a
Beta activity	6/6	35*	140*	72*	14	n/a
Strontium-89/90	6/6	10*	60*	30*	6.6	40
Tritium	6/6	4,600*	21,000*	15,000*	2,400	80,000
Northwest Tributary prior to entering 1st Creek at ORNL (NWTK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	5.9	11	8.4	2.5	n/a
pH (Std Unit)	2/2	7.0	8.2	n/a	n/a	n/a
Temperature (deg C)	2/2	8.6	15	12	3.1	n/a
Radionuclides (pCi/L) (f)						
Beta activity	2/2	54*	150*	100	49	n/a
Strontium-89/90	2/2	22*	76*	49	27	40
Raccoon Creek sampling station prior to entering CRK 31 (RCK 2.0) (h)						
Field measurements						
Dissolved Oxygen (ppm)	1/1	5.9	5.9	n/a	n/a	n/a
pH (Std Unit)	1/1	7.8	7.8	n/a	n/a	n/a
Temperature (deg C)	1/1	12	12	n/a	n/a	n/a
Radionuclides (pCi/L) (f)						
Beta activity	1/1	21*	21*	n/a	n/a	n/a
Strontium-89/90	1/1	8.2*	8.2*	n/a	n/a	40

Table 2.10. Surface water analyses (2007) at ORNL Environmental Monitoring Plan surface water locations (a) (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Walker Branch prior to entering CRK 53.4 (WBK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	7.5	7.6	7.6	0.05	n/a
pH (Std Unit)	2/2	7.4	8.0	n/a	n/a	n/a
Temperature (deg C)	2/2	11	16	13	2.2	n/a
Radionuclides (pCi/L) (f)						
Beta activity	1/2	U1.2*	3.7*	~2.5	1.2	n/a
White Oak Lake at White Oak Dam (WCK 1.0)						
Field measurements						
Dissolved Oxygen (ppm)	12/12	3.8	13	7.5	0.66	5
pH (Std Unit)	12/12	6.7	8.4	n/a	n/a	n/a
Temperature (deg C)	12/12	11	30	19	2.0	30.5
Metals (mg/L)						
Aluminum	12/12	0.27	E2.8	~1.0	0.2	n/a
Antimony	2/12	<0.0005	0.00053	~0.0005	0.0000026	n/a
Arsenic	5/12	<0.0015	0.0026	~0.0018	0.00012	0.34
Barium	12/12	0.025	0.059	0.047	0.0025	n/a
Beryllium	1/12	<0.0001	0.00014	~0.0001	0.0000033	n/a
Boron	12/12	0.014	0.03	0.024	0.0012	n/a
Cadmium	1/12	<0.0001	0.00011	~0.00011	0.0000015	0.002
Calcium	12/12	22	49	43	2.0	n/a
Chromium	12/12	0.0018	0.013	0.0062	0.001	n/a
Cobalt	12/12	0.00034	0.0011	0.00068	0.000065	n/a
Copper	12/12	0.0022	0.0057	0.004	0.00029	0.013
Iron	12/12	0.6	2.2	1.2	0.13	n/a

Table 2.10. Surface water analyses (2007) at ORNL Environmental Monitoring Plan surface water locations (a) (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Lead	12/12	0.00057	0.0024	0.0016	0.00017	0.065
Lithium	11/12	<0.002	0.0056	~0.0034	0.00028	n/a
Magnesium	12/12	5.3	14	11	0.78	n/a
Manganese	12/12	0.064	0.18	0.11	0.011	n/a
Mercury	6/12	<0.00003	0.00011	~0.000064	0.0000084	0.0014
Molybdenum	12/12	0.0038	0.037	0.014	0.0031	n/a
Nickel	12/12	0.0011	0.0033	0.0024	0.0002	0.47
Phosphorous	12/12	0.12	0.49	0.3	0.038	n/a
Potassium	12/12	2.1	8.4	4.3	0.5	n/a
Silver	3/12	<0.0002	0.00052	~0.00025	0.000029	0.0032
Sodium	12/12	11	38	27	3.0	n/a
Strontium	12/12	0.056	0.15	0.12	0.0074	n/a
Sulfur	12/12	8.9	32	22	2.2	n/a
Thallium	5/12	<0.0003	0.00072	~0.0004	0.000034	n/a
Titanium	12/12	0.0076	0.058	0.018	0.0048	n/a
Uranium	12/12	0.001	0.0017	0.0013	0.00005	n/a
Vanadium	5/12	<0.003	<0.01	~0.0076	0.00079	n/a
Zinc	12/12	0.011	0.032	0.02	0.0018	0.12
Zirconium	11/12	<0.0005	0.0033	~0.0013	0.00021	n/a
Radionuclides (pCi/L) (f)						
Alpha activity	12/12	2.2*	18*	8.5*	1.3	n/a
Beta activity	12/12	120*	430*	180*	24	n/a
Cesium-137	12/12	9.6*	220*	78*	18	120
Plutonium-238	1/12	0.0	0.34*	0.029	0.029	1.6
Plutonium-239/240	6/12	0.0	1.6*	0.38*	0.14	1.2
Strontium-89/90	12/12	43*	66*	55*	2.2	40
Thorium-230	1/12	0.0	0.14*	0.011	0.011	12

Table 2.10. Surface water analyses (2007) at ORNL Environmental Monitoring Plan surface water locations (a) (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Thorium-232	1/12	0.0	0.32*	0.027	0.027	2
Tritium	12/12	15,000*	36,000*	26,000*	1,700	80,000
Uranium-233/234	11/12	0.0	5.8*	2.7*	0.45	20
Uranium-235/236	1/12	0.0	0.18*	0.015	0.015	n/a
Uranium-238	6/12	0.0	0.75*	0.27*	0.09	24
Volatile organics (ug/L)						
Acetone	5/12	J1.5	U5.0	~4.0	0.4	n/a
Chloroform	12/12	J0.37	J1.2	~0.64	0.077	n/a
Methylene chloride	1/12	U5.0	J7.9	~5.2	0.24	n/a
White Oak Creek downstream from ORNL (WCK 2.6)						
Field measurements						
Dissolved Oxygen (ppm)	6/6	6.7	12	9.1	0.78	5
pH (Std Unit)	6/6	7.4	8.0	n/a	n/a	n/a
Temperature (deg C)	6/6	12	24	17	2.2	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	6/6	2.9*	14*	5.5*	1.8	n/a
Beta activity	6/6	48*	100*	85*	8.5	n/a
Cesium-137	6/6	11*	32*	21*	3.3	120
Strontium-89/90	6/6	17*	33*	29*	2.5	40
Thorium-230	1/6	0.0	0.55*	0.091	0.091	12
Tritium	6/6	21,000*	47,000*	28,000*	3,900	80,000
Uranium-233/234	4/6	0.0	4.2*	1.5*	0.63	20
Uranium-235/236	1/6	0.0	0.12*	0.02	0.02	n/a
Uranium-238	3/6	0.0	0.64*	0.24*	0.11	24

Table 2.10. Surface water analyses (2007) at ORNL Environmental Monitoring Plan surface water locations (a) (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
White Oak Creek upstream from ORNL (WCK 6.8)						
Field measurements						
Dissolved Oxygen (ppm)	4/4	8.0	11	9.6	0.6	5
pH (Std Unit)	4/4	7.0	7.9	n/a	n/a	n/a
Temperature (deg C)	4/4	9.1	21	14	2.4	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	1/4	U0.051	U1.9*	~1.1*	0.42	n/a
Beta activity	1/4	U-0.47	3.9*	~1.6	0.9	n/a

(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) Standard error of the mean.

(e) 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 at or above MDA.*

(g) Discontinued sampling at this location as of October 2007; consequently, only one sampling event occurred in 2007.

(h) Location was dry at the time of the October sampling event.

Table 3.1. 2007 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)					
Antimony	1/2	<0.053	0.059	~0.056	0.003
Barium	2/2	0.094	0.12	0.11	0.013
Cadmium	2/2	0.0094	0.025	0.017	0.0078
Calcium	2/2	720	1,100	910	190
Chromium	2/2	0.074	0.08	0.077	0.003
Copper	2/2	0.21	0.22	0.22	0.005
Iron	2/2	3.7	3.9	3.8	0.1
Lead	2/2	0.046	0.049	0.048	0.0015
Lithium	2/2	0.099	0.099	0.099	0.0
Magnesium	2/2	240	270	260	15
Manganese	2/2	0.8	1.2	1.0	0.2
Mercury	2/2	0.081	0.092	0.087	0.0055
Phosphorous	2/2	2,200	2,400	2,300	100
Potassium	2/2	2,900	3,000	3,000	50
Selenium	2/2	0.96	1.1	1.0	0.07
Silicon	2/2	2.6	2.8	2.7	0.1
Sodium	2/2	530	560	550	15
Strontium	2/2	0.55	0.81	0.68	0.13
Thallium	2/2	0.0074	0.0075	0.0075	0.00005
Uranium	2/2	0.00057	0.00077	0.00067	0.0001
Zinc	2/2	12	13	13	0.5
Pesticides and PCBs (ug/kg)					
4,4'-DDE	2/2	J0.72	J0.99	~0.86	0.14
4,4'-DDT	1/2	U1.7	6.1	~3.9	2.2
alpha-BHC	2/2	J0.95	J1.1	~1.0	0.075

Table 3.1. 2007 tissue concentrations in Sunfish(a) (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)
alpha-Chlordane	2/2	J0.4	J0.85	~0.63	0.23
PCB-1260	2/2	27	32	30	2.5
Radionuclides (pCi/g) (e)					
Beta activity	2/2	1.3*	1.8*	1.6*	0.25
Potassium-40	2/2	3.0*	3.1*	3.0*	0.06
Strontium-90	1/2	U0.011*	0.016*	~0.014	0.0023
Clinch River downstream from ORNL (CRK 32)					
Metals (mg/kg)					
Antimony	1/2	<0.052	0.099	~0.076	0.024
Barium	2/2	0.11	0.12	0.12	0.005
Calcium	2/2	1,000	1,000	1,000	0.0
Chromium	2/2	0.087	0.089	0.088	0.001
Copper	2/2	0.24	0.25	0.25	0.005
Iron	2/2	3.5	3.8	3.7	0.15
Lead	2/2	0.048	0.053	0.051	0.0025
Lithium	2/2	0.098	0.098	0.098	0.0
Magnesium	2/2	270	280	280	5.0
Manganese	2/2	0.64	0.78	0.71	0.07
Mercury	2/2	0.019	0.024	0.022	0.0025
Phosphorous	2/2	2,400	2,500	2,500	50
Potassium	2/2	2,900	3,100	3,000	100
Selenium	2/2	1.3	1.3	1.3	0.0
Silicon	2/2	2.5	2.7	2.6	0.1
Sodium	2/2	500	530	520	15
Strontium	2/2	0.82	0.85	0.84	0.015
Thallium	2/2	0.0094	0.0099	0.0097	0.00025
Uranium	2/2	0.00038	0.0004	0.00039	0.00001
Zinc	2/2	13	13	13	0.0

Table 3.1. 2007 tissue concentrations in Sunfish(a) (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)
Pesticides and PCBs (ug/kg)					
4,4'-DDE	2/2	J0.92	J0.97	~0.95	0.025
alpha-BHC	2/2	J0.7	J0.75	~0.73	0.025
alpha-Chlordane	2/2	J0.77	J0.95	~0.86	0.09
PCB-1260	2/2	22	26	24	2.0
Radionuclides (pCi/g) (e)					
Beta activity	2/2	1.9*	2.0*	1.9*	0.075
Potassium-40	2/2	2.5*	3.9*	3.2	0.71
Strontium-90	1/2	U0.0096*	0.021*	~0.015	0.0055
Clinch River (Solway Bridge) upstream from all DOE ORR inputs (CRK 70)					
Metals (mg/kg)					
Aluminum	1/2	<0.21	2.1	~1.2	0.95
Barium	2/2	0.083	0.2	0.14	0.059
Cadmium	1/2	<0.0073	0.0093	~0.0083	0.001
Calcium	2/2	800	2,400	1,600	800
Chromium	2/2	0.067	0.096	0.082	0.015
Copper	2/2	0.23	0.25	0.24	0.01
Iron	2/2	3.4	7.0	5.2	1.8
Lead	2/2	0.046	0.05	0.048	0.002
Lithium	2/2	0.098	0.1	0.099	0.001
Magnesium	2/2	230	280	260	25
Manganese	2/2	0.42	1.1	0.76	0.34
Mercury	2/2	0.025	0.025	0.025	0.0
Phosphorous	2/2	2,100	2,800	2,500	350
Potassium	2/2	2,700	2,700	2,700	0.0
Selenium	2/2	1.5	1.5	1.5	0.0
Silicon	2/2	2.7	4.4	3.6	0.85
Sodium	2/2	520	520	520	0.0

Table 3.1. 2007 tissue concentrations in Sunfish(a) (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)
Strontium	2/2	0.71	2.0	1.4	0.65
Thallium	2/2	0.0082	0.0094	0.0088	0.0006
Titanium	1/2	<0.0042	0.046	~0.025	0.021
Uranium	2/2	0.00034	0.00053	0.00044	0.000095
Zinc	2/2	13	15	14	1.0
Pesticides and PCBs (ug/kg)					
alpha-Chlordane	2/2	J0.36	J0.43	~0.4	0.035
PCB-1260	2/2	20	26	23	3.0
Radionuclides (pCi/g) (e)					
Beta activity	2/2	1.4*	1.7*	1.5*	0.16
Potassium-40	2/2	3.3*	3.6*	3.5*	0.16

(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; "<" indicates the value for a parameter was not quantifiable at the analytical detection limit; and "U" indicates that the value was undetected at the analytical detection limit or MDA.

(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 at or above MDA.

Table 3.2. 2007 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)					
Aluminum	1/2	<0.21	0.48	~0.35	0.14
Antimony	2/2	0.055	0.1	0.078	0.023
Barium	2/2	0.03	0.037	0.034	0.0035
Calcium	2/2	85	100	93	7.5
Chromium	2/2	0.051	0.066	0.059	0.0075
Copper	2/2	0.26	0.29	0.28	0.015
Iron	2/2	4.3	5.5	4.9	0.6
Lead	2/2	0.03	0.055	0.043	0.013
Lithium	2/2	0.11	0.11	0.11	0.0
Magnesium	2/2	210	210	210	0.0
Manganese	2/2	0.18	0.2	0.19	0.01
Mercury	2/2	0.16	0.19	0.18	0.015
Phosphorous	2/2	2,000	2,000	2,000	0.0
Potassium	2/2	2,900	2,900	2,900	0.0
Selenium	2/2	0.67	0.7	0.69	0.015
Silicon	2/2	1.7	2.1	1.9	0.2
Sodium	2/2	350	360	360	5.0
Strontium	2/2	0.082	0.086	0.084	0.002
Thallium	2/2	0.0048	0.0054	0.0051	0.0003
Titanium	1/2	<0.0042	0.0094	~0.0068	0.0026
Uranium	2/2	0.00043	0.00072	0.00058	0.00015
Zinc	2/2	5.2	5.4	5.3	0.1
Pesticides and PCBs (ug/kg)					
4,4'-DDE	2/2	4.4	13	8.7	4.3
alpha-Chlordane	2/2	4.8	14	9.4	4.6
PCB-1254	2/2	71	75	73	2.0
PCB-1260	2/2	140	160	150	10
Radionuclides (pCi/g) (e)					
Beta activity	2/2	2.0*	2.2*	2.1*	0.08
Potassium-40	2/2	2.9*	3.0*	2.9*	0.03

Table 3.2. 2007 tissue concentrations in Catfish(a) (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	1/2	<0.21	0.68	~0.45	0.24
Antimony	2/2	0.083	0.1	0.092	0.0085
Barium	2/2	0.02	0.02	0.02	0.0
Calcium	2/2	77	78	78	0.5
Chromium	2/2	0.063	0.067	0.065	0.002
Copper	2/2	0.26	0.32	0.29	0.03
Iron	2/2	2.9	5.0	4.0	1.1
Lead	2/2	0.057	0.059	0.058	0.001
Lithium	2/2	0.1	0.1	0.1	0.0
Magnesium	2/2	220	220	220	0.0
Manganese	2/2	0.15	0.19	0.17	0.02
Mercury	2/2	0.079	0.082	0.081	0.0015
Phosphorous	2/2	2,000	2,000	2,000	0.0
Potassium	2/2	2,900	3,000	3,000	50
Selenium	2/2	0.68	0.82	0.75	0.07
Silicon	2/2	1.1	1.5	1.3	0.2
Sodium	2/2	340	360	350	10
Strontium	2/2	0.062	0.067	0.065	0.0025
Thallium	2/2	0.0051	0.0068	0.006	0.00085
Uranium	2/2	0.00031	0.00035	0.00033	0.00002
Zinc	2/2	5.5	6.2	5.9	0.35
Pesticides and PCBs (ug/kg)					
4,4'-DDE	2/2	15	15	15	0.0
alpha-Chlordane	2/2	16	16	16	0.0
PCB-1254	2/2	180	280	230	50
PCB-1260	2/2	230	270	250	20
Radionuclides (pCi/g) (e)					
Beta activity	2/2	1.6*	1.9*	1.8*	0.15
Potassium-40	2/2	3.2*	3.2*	3.2*	0.01
Strontium-90	1/2	U0.00052	0.018*	~0.0095	0.0089

Table 3.2. 2007 tissue concentrations in Catfish(a) (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)
Clinch River (Solway Bridge) upstream from all DOE ORR inputs (CRK 70)					
Metals (mg/kg)					
Antimony	1/2	<0.053	0.13	~0.092	0.039
Barium	2/2	0.022	0.024	0.023	0.001
Calcium	2/2	72	73	73	0.5
Chromium	2/2	0.06	0.067	0.064	0.0035
Copper	2/2	0.26	0.32	0.29	0.03
Iron	2/2	2.8	2.8	2.8	0.0
Lead	2/2	0.041	0.049	0.045	0.004
Lithium	2/2	0.11	0.11	0.11	0.0
Magnesium	2/2	210	210	210	0.0
Manganese	2/2	0.14	0.16	0.15	0.01
Mercury	2/2	0.058	0.063	0.061	0.0025
Phosphorous	2/2	2,000	2,000	2,000	0.0
Potassium	2/2	2,800	2,900	2,900	50
Selenium	2/2	0.79	0.82	0.81	0.015
Silicon	2/2	1.1	1.2	1.2	0.05
Silver	1/2	<0.013	0.014	~0.014	0.0005
Sodium	2/2	340	350	350	5.0
Strontium	2/2	0.063	0.066	0.065	0.0015
Thallium	2/2	0.0061	0.0064	0.0063	0.00015
Uranium	2/2	0.00036	0.0006	0.00048	0.00012
Zinc	2/2	5.7	6.2	6.0	0.25
Pesticides and PCBs (ug/kg)					
4,4'-DDE	2/2	6.4	J6.5	~6.5	0.05
alpha-Chlordane	2/2	15	20	18	2.5
gamma-Chlordane	2/2	8.1	8.8	8.5	0.35
PCB-1254	2/2	45	75	60	15
PCB-1260	2/2	110	240	180	65
Radionuclides (pCi/g) (e)					
Alpha activity	1/2	U0.0098	0.082*	~0.046	0.036
Beta activity	2/2	2.0*	2.3*	2.2*	0.12

Table 3.2. 2007 tissue concentrations in Catfish(a) (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)
Potassium-40	2/2	2.2*	2.6*	2.4*	0.17
Strontium-90	1/2	U0.0046	0.017*	~0.011	0.0063

(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; "<" indicates the value for a parameter was not quantifiable at the analytical detection limit; and "U" indicates that the value was undetected at the analytical detection limit or MDA.

(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 at or above MDA.

Table 3.3. Radiological constituents in settleable solids near the ORR, 2007[a]

Event	Co-60[b]	Cs-137[b]	Gross alpha[c]	Gross beta[c]
		White Oak Creek Headwaters upstream from ORNL (WOCHW)		
September	b	b	6.7 ± 3.2	8.1 ± 3.3
December	b	44 ± 6	b	26 ± 2
		Melton Branch upstream from ORNL (MEK 2.1)		
September	b	b	45 ± 18	440 ± 40
December	b	b	b	13 ± 1
		White Oak Creek downstream from ORNL (WCK 2.6)		
September	b	680 ± 300	82 ± 34	3500 ± 100
December	b	b	b	b
		White Oak Lake at White Oak Dam (WCK 1.0)		
September	b	1500 ± 100	170 ± 70	9200 ± 300
December	b	170 ± 10	2.0 ± 0.9	92 ± 40

[a]All data are given in picocuries per gram (1 pCi = 3.7E-02 Bq).
[b]No value detected above MDA.

Table 3.4. Surface water analyses (2007) 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)	10/10	5.7	14	8.7	0.73	n/a
pH (Std Unit)	10/10	7.2	8.4	n/a	n/a	n/a
Temperature (deg C)	10/10	7.7	24	16	1.7	30.5
Metals (mg/L)						
Aluminum	9/9	E0.11	0.44	~0.23	0.039	n/a
Arsenic	1/9	<0.0015	0.0022	~0.0016	0.000078	0.05
Barium	9/9	0.03	0.045	0.038	0.0014	n/a
Boron	9/9	0.015	0.02	0.018	0.00069	n/a
Calcium	9/9	35	42	37	0.77	n/a
Chromium	2/9	<0.001	0.0017	~0.0011	0.000078	n/a
Cobalt	9/9	0.00024	0.00051	0.00035	0.000027	n/a
Copper	9/9	0.00092	0.0076	0.0022	0.00069	n/a
Iron	9/9	0.25	0.68	0.42	0.054	n/a
Lead	2/9	<0.0005	0.00072	~0.00053	0.000025	n/a
Lithium	9/9	0.0028	0.0042	0.0036	0.00018	n/a
Magnesium	9/9	9.5	13	11	0.41	n/a
Manganese	9/9	0.028	0.095	0.054	0.0072	n/a
Molybdenum	9/9	0.00047	0.0013	0.00087	0.000089	n/a
Nickel	9/9	0.001	0.0024	0.0017	0.00017	0.61
Phosphorous	7/9	<0.02	0.036	~0.026	0.0018	n/a
Potassium	9/9	1.7	2.1	1.9	0.039	n/a
Sodium	9/9	5.8	8.6	7.4	0.34	n/a
Strontium	9/9	0.1	0.14	0.12	0.0042	n/a
Sulfur	9/9	7.4	10	8.7	0.35	n/a
Thallium	1/9	<0.0003	0.0005	~0.00039	0.00002	0.0017
Titanium	8/9	<0.002	0.0062	~0.0037	0.00046	n/a
Uranium	9/9	0.00023	0.00051	0.00034	0.000026	n/a
Zinc	9/9	0.0038	0.033	0.0084	0.0031	n/a
Radionuclides (pCi/L) (f)						
Alpha activity	1/10	U0.13	U2.1*	~1.0*	0.2	n/a
Beta activity	6/10	U1.1	3.8*	~2.6*	0.27	n/a
Volatile organics (ug/L)						
Acetone	2/9	J2.5	U5.0	~4.5	0.35	n/a
Methylene chloride	1/9	BJ2.1	U5.0	~4.7	0.32	47

Table 3.4. Surface water analyses (2007) at ORR Environmental Monitoring Plan surface water locations (a) (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Water supply intake for the ETTP (CRK 23)						
Field measurements						
Dissolved Oxygen (ppm)	10/10	5.7	14	9.5	0.78	n/a
pH (Std Unit)	10/10	7.0	8.4	n/a	n/a	n/a
Temperature (deg C)	10/10	7.4	21	15	1.6	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	4/10	U-0.16	4.3*	~1.4*	0.49	n/a
Beta activity	6/10	U1.6*	7.2*	~3.6*	0.61	n/a
Tritium	2/10	U-54	330*	~110*	37	80,000
Clinch River downstream from ORNL (CRK 32)						
Field measurements						
Dissolved Oxygen (ppm)	10/10	5.8	16	9.6	0.96	n/a
pH (Std Unit)	10/10	7.1	8.4	n/a	n/a	n/a
Temperature (deg C)	10/10	7.2	20	15	1.5	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	2/10	U-0.6	3.3*	~1.1*	0.34	n/a
Beta activity	8/10	U1.2	4.7*	~3.2*	0.33	n/a
Strontium-89/90	1/10	U-1.0	1.3*	~0.16	0.18	40
Thorium-230	1/10	0.0	0.36*	0.036	0.036	12
Uranium-233/234	1/10	0.0	4.9*	0.49	0.49	20
Uranium-238	1/10	0.0	0.86*	0.086	0.086	24
Water supply intake for Knox County (CRK 58)						
Field measurements						
Dissolved Oxygen (ppm)	10/10	7.5	14	9.8	0.65	n/a
pH (Std Unit)	10/10	6.8	8.4	n/a	n/a	n/a
Temperature (deg C)	10/10	8.4	26	18	2.0	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	1/10	U-1.6	U1.9*	~0.52	0.33	n/a
Beta activity	5/10	U0.5	13*	~3.5*	1.1	n/a
Melton Hill Reservoir above city of Oak Ridge water intake (CRK 66)						
Field measurements						
Dissolved Oxygen (ppm)	10/10	6.5	16	10	0.91	n/a

Table 3.4. Surface water analyses (2007) at ORR Environmental Monitoring Plan surface water locations (a) (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
pH (Std Unit)	10/10	6.7	8.5	n/a	n/a	n/a
Temperature (deg C)	10/10	8.7	26	18	1.8	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	1/10	U-0.075	1.4*	~0.72*	0.18	n/a
Beta activity	4/10	U-0.48	5.1*	~2.2*	0.45	n/a
Potassium-40	1/10	U-23	34*	~-0.58	5.1	280
Clinch River (Solway Bridge) upstream from all DOE ORR inputs (CRK 70)						
Field measurements						
Dissolved Oxygen (ppm)	9/9	6.5	11	8.8	0.44	n/a
pH (Std Unit)	9/9	6.4	8.6	n/a	n/a	n/a
Temperature (deg C)	9/9	10	26	19	1.6	30.5
Metals (mg/L)						
Aluminum	9/9	0.053	0.52	0.16	0.047	n/a
Antimony	1/9	<0.0005	0.00075	~0.00053	0.000028	0.014
Arsenic	1/9	<0.0015	0.0021	~0.0016	0.000067	0.05
Barium	9/9	0.034	0.047	0.038	0.0012	n/a
Boron	9/9	0.014	0.023	0.018	0.00096	n/a
Calcium	9/9	34	42	37	0.82	n/a
Chromium	3/9	<0.001	0.0019	~0.0012	0.0001	n/a
Cobalt	9/9	0.00018	0.00036	0.0003	0.00002	n/a
Copper	9/9	0.0011	0.0034	0.0024	0.00022	n/a
Iron	9/9	0.19	0.53	0.34	0.038	n/a
Lead	1/9	<0.0005	0.00051	~0.0005	0.0000011	n/a
Lithium	9/9	0.0039	0.0071	0.0048	0.00033	n/a
Magnesium	9/9	9.8	13	12	0.28	n/a
Manganese	9/9	0.032	0.046	0.041	0.0014	n/a
Molybdenum	9/9	0.00061	0.0034	0.0016	0.00027	n/a
Nickel	9/9	0.0012	0.0028	0.0018	0.00019	0.61
Phosphorous	4/9	<0.02	0.032	~0.023	0.0014	n/a
Potassium	9/9	1.7	2.0	1.8	0.029	n/a
Sodium	9/9	7.2	9.0	8.0	0.2	n/a
Strontium	9/9	0.11	0.14	0.13	0.0031	n/a
Sulfur	9/9	8.5	10	9.5	0.21	n/a
Thallium	1/9	<0.0003	0.00041	~0.00037	0.000017	0.0017
Titanium	6/9	<0.002	0.014	~0.0036	0.0013	n/a
Uranium	9/9	0.00025	0.00033	0.00028	0.0000094	n/a
Zinc	9/9	0.003	0.017	0.0069	0.0016	n/a
Zirconium	3/9	<0.0005	0.0014	~0.00066	0.0001	n/a

Table 3.4. Surface water analyses (2007) at ORR Environmental Monitoring Plan surface water locations (a) (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Volatile organics (ug/L)						
Acetone	1/9	J3.4	U5.0	~4.8	0.17	n/a
Radionuclides (pCi/L) (f)						
Alpha activity	1/9	U0.055	U1.9*	~0.93*	0.18	n/a
Beta activity	4/9	U1.6*	3.7*	~2.6*	0.22	n/a

(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 analytical detection limit or MDA; "E" indicates that the percent difference between the parent sample and its serial dilution's concentration exceeds 10%; "J" indicates that the value was estimated at or below the anlaytical detection limit by the laboratory; "BJ" indicates that the analyte was detected in the associated lab blank and that 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) Tennessee General Water Quality Criteria for Recreation and Domestic Use, as amended (CRK 16, CRK 23, CRK 32, CRK 58, CRK 66, CRK 70). 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 at or above MDA.

Table 4.1. Y-12 Plant Discharge Point C11, STORMWATER MONITORING SITE C11

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	349	14.849	5.539	6.934		0
pH, Standard Units	25	8.1	7.3	d	9/ 6(e)	0
TEMPERATURE, deg C	26	21.3	11.3	16.6	30.5	0
Total Residual Chlorine	24	<0.05	<0.05	<0.05		0
Silver	13	<0.0004	<0.0004	<0.0004		0
Aluminum	13	1.35	<0.2	<0.4		0
Arsenic	13	<0.002	<0.002	<0.002		0
Boron	13	<0.1	<0.1	<0.1		0
Barium	13	0.0508	0.0363	0.0409		0
Beryllium	13	<0.0002	<0.0002	<0.0002		0
Cadmium	13	<0.001	<0.001	<0.001		0
Cobalt	13	0.0019	0.0002	0.0006		0
Chromium	13	<0.004	<0.004	<0.004		0
Copper	13	0.0177	0.0024	0.0051		0
Hexane Extractable Material	13	<10.0	<5.5	<6.2		0
Mercury	25	0.0009	<0.0002	<0.0003		0
Lithium	13	0.0228	<0.01	<0.02		0
Magnesium	13	12.3	9.59	11.3		0
Molybdenum	13	0.0098	0.0039	0.0062		0
Total Nitrogen	12	3.83	1.07	1.65		0
Nickel	13	0.0037	<0.002	<0.002		0
Nitrate/Nitrite as Nitrogen	13	3.83	0.971	1.41		0
Phosphorus	13	<0.5	<0.5	<0.5		0
Lead	13	0.0048	<0.0002	<0.0008		0
Antimony	13	<0.001	<0.001	<0.001		0
Strontium	13	0.146	0.107	0.128		0
Surfactant	13	<0.1	<0.05	<0.07		0
Suspended Solids	25	39.8	1.4	5.7		0
Thallium	13	<0.0002	<0.0002	<0.0002		0
Uranium	13	0.0199	0.0016	0.0060		0
Vanadium	13	<0.02	<0.02	<0.02		0
Zinc	13	0.191	0.0099	0.029		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 4.2. Y-12 Plant Discharge Point 021, OUTFALL 021

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	356	3.125	0.001	0.09		0
pH, Standard Units	6	8.2	7.2	d	9/ 6(e)	0
Total Residual Chlorine	4	<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.

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

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	365	1.384	0.033	0.10		0
pH, Standard Units	13	7.2	6.6	d	9/ 6(e)	0
Mercury	53	0.0069	<0.0002	<0.002		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 4.4. Y-12 Plant Discharge Point 055, OUTFALL 055

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard Error	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	2	6.1	+/-3.6	5.2	+/-2.9	5.6	0.45	e	9.8E-06
Beta activity (pCi/L)	2	2.0*	+/-3.1	2.0*	+/-3.1	2.0	0.0	e	3.5E-06
Cobalt-60 (pCi/L)	2	0.78*	+/-2.3	-1.2*	+/-2.1	-0.21	0.99	-0.0042	-3.6E-07
Cesium-137 (pCi/L)	2	1.8*	+/-2.5	0.25*	+/-2.3	1.0	0.78	0.034	1.8E-06
Radium-226 (pCi/L)	2	0.26*	+/-0.30	0.16*	+/-0.78	0.21	0.050	0.21	3.6E-07
Radium-228 (pCi/L)	2	0.47*	+/-1.0	-0.077*	+/-0.96	0.20	0.27	0.20	3.4E-07
Strontium-89/90 (pCi/L)	2	1.6*	+/-1.5	0.79*	+/-1.1	1.2	0.40	0.12	2.1E-06
Total Radium Alpha (pCi/L)	2	0.24*	+/-0.20	0.053*	+/-0.22	0.15	0.094	e	2.5E-07
Technetium-99 (pCi/L)	2	25.0	+/-9.6	-3.1*	+/-8.9	11	14	0.011	1.9E-05
Thorium-228 (pCi/L)	2	0.027*	+/-0.25	-0.088*	+/-0.21	-0.030	0.058	-0.0076	-5.3E-08
Thorium-230 (pCi/L)	2	0.62*	+/-1	-0.29*	+/-0.62	0.16	0.46	0.055	2.9E-07
Thorium-232 (pCi/L)	2	-0.0046*	+/-0.17	-0.023*	+/-0.085	-0.014	0.0092	-0.028	-2.4E-08
Thorium-234 (pCi/L)	2	1.2	+/-0.38	0.64	+/-0.28	0.92	0.28	0.0092	1.6E-06
Uranium-234 (pCi/L)	2	2.6	+/-0.64	2.3	+/-0.53	2.4	0.15	0.49	4.2E-06
Uranium-235 (pCi/L)	2	0.2*	+/-0.17	0.052*	+/-0.12	0.13	0.074	0.021	2.2E-07
Uranium-236 (pCi/L)	2	0.025*	+/-0.062	0.016*	+/-0.083	0.020	0.0045	0.0041	3.6E-08
Uranium-238 (pCi/L)	2	1.2	+/-0.38	0.64	+/-0.28	0.92	0.28	0.15	1.6E-06

(e) Not applicable
* Provisional Result

Table 4.5. Y-12 Plant Discharge Point 055, OUTFALL 055

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	359	0.0369	0.00001	0.001		0
pH, Standard Units	14	8.2	7.2	d	9/ 6(e)	0
Total Residual Chlorine	3	<0.05	<0.05	<0.05	0.5	0
Mercury	53	0.0032	<0.0002	<0.0003	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.

Table 4.6. Y-12 Plant Discharge Point 077, OUTFALL 077

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	13	0.0114	0.0114	0.0114		0
pH, Standard Units	13	8.3	7.4	d	9/ 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 4.7. Y-12 Plant Discharge Point 109, OUTFALL 109

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	6	1.27	0.0913	0.311		0
pH, Standard Units	6	7.9	7.1	d	9/ 6(e)	0
Total Residual Chlorine	5	0.059	<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 4.8. Y-12 Plant Discharge Point 125, OUTFALL 125

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard Error	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	4	13.0	+/-3.7	0.68*	+/-2.6	5.6	3.0	e	3.8E-03
Beta activity (pCi/L)	4	12.0	+/-4.1	2.1*	+/-2.8	5.1	2.3	e	3.5E-03
Cobalt-60 (pCi/L)	4	1.0*	+/-2.4	-1.6*	+/-2.3	0.085	0.58	0.0017	5.8E-05
Cesium-137 (pCi/L)	4	3.1*	+/-2.4	-0.046*	+/-2.4	1.5	0.67	0.050	1.0E-03
Radium-228 (pCi/L)	4	20.0	+/-12	-2.3*	+/-14	10	5.5	10	7.0E-03
Thorium-228 (pCi/L)	4	0.21*	+/-0.25	-0.056*	+/-0.18	0.036	0.062	0.0091	2.5E-05
Thorium-230 (pCi/L)	4	0.18*	+/-0.26	-0.48*	+/-0.6	-0.20	0.15	-0.068	-1.4E-04
Thorium-232 (pCi/L)	4	0.016*	+/-0.11	-0.023*	+/-0.085	-0.0073	0.0086	-0.015	-5.0E-06
Thorium-234 (pCi/L)	3	0.5	+/-0.3	0.19*	+/-0.21	0.4	0.09	0.004	3E-04
Tritium (pCi/L)	4	-35.0*	+/-530	-820.0*	+/-570	-406	178	-0.0203	-2.78E-01
Uranium-234 (pCi/L)	4	4.3	+/-0.84	0.34*	+/-0.42	1.8	0.89	0.35	1.2E-03
Uranium-235 (pCi/L)	4	0.19*	+/-0.2	0.026*	+/-0.078	0.079	0.038	0.013	5.4E-05
Uranium-236 (pCi/L)	4	0.13*	+/-0.12	0.0*	+/-0.051	0.044	0.029	0.0088	3.0E-05
Uranium-238 (pCi/L)	4	0.5	+/-0.3	0.19*	+/-0.21	0.37	0.068	0.062	2.5E-04

(e) Not applicable
* Provisional Result

Table 4.9. Y-12 Plant Discharge Point 125, OUTFALL 125

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	344	0.807	0.07	0.5		0
IC 25 Ceriodaphnia, %	2	>36.0	>36.0	>36.0		0
IC 25 Fathead Minnows, %	2	>36.0	>36.0	>36.0		0
pH, Std Unit	13	7.5	6.9	d	9/ 6(e)	0
Total Residual Chlorine	13	<0.05	<0.05	<0.05		0
Cadmium	13	<0.001	<0.001	<0.001	0.025	0
Mercury	52	<0.0002	<0.0002	<0.0002		0
Lead	13	0.0021	<0.0002	<0.0006	1.19	0
PCB, Total	4	0.0005U	0.0005U	0.0005U	0.002	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 4.10. Y-12 Plant Discharge Point 135, OUTFALL 135

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	365	12.686	0.078	0.36		0
IC 25 Ceriodaphnia, %	2	>20.0	>20.0	>20.0		0
IC 25 Fathead Minnows, %	2	>20.0	>20.0	>20.0		0
pH, Standard Units	13	8.3	7.2	d	9/ 6(e)	0
Total Residual Chlorine	13	0.28	<0.05	<0.07		0
Lead	13	0.0047	<0.0002	<0.0007	1.19	0
PCB, Total	4	0.0006U	0.0005U	0.0005U	0.002	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 4.11. Y-12 Plant Discharge Point 135, OUTFALL 135

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard Error	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	4	8.8	+/-3.5	4.7	+/-3.6	6.6	0.86	e	3.3E-03
Beta activity (pCi/L)	4	11.0	+/-4.2	1.2*	+/-3.2	5.6	2.2	e	2.8E-03
Cobalt-60 (pCi/L)	4	1.7*	+/-2.3	-1.7*	+/-2.1	-0.37	0.79	-0.0075	-1.9E-04
Cesium-137 (pCi/L)	4	1.4*	+/-2.3	-1.1*	+/-2.2	0.50	0.56	0.017	2.5E-04
Radium-226 (pCi/L)	4	0.41*	+/-0.83	-0.16*	+/-0.40	0.15	0.14	0.15	7.6E-05
Radium-228 (pCi/L)	4	1.9	+/-0.72	0.18*	+/-0.67	0.86	0.37	0.86	4.3E-04
Strontium-89/90 (pCi/L)	4	3.0	+/-2.3	-0.97*	+/-1.4	1.2	0.82	0.12	5.9E-04
Total Radium Alpha (pCi/L)	4	1.2	+/-0.42	-0.17*	+/-0.23	0.65	0.32	e	3.3E-04
Technetium-99 (pCi/L)	4	4.2*	+/-8.7	-34.0*	+/-9.8	-7.6	8.9	-0.0076	-3.8E-03
Thorium-228 (pCi/L)	4	0.95*	+/-0.98	0.0*	+/-0.29	0.26	0.23	0.065	1.3E-04
Thorium-230 (pCi/L)	4	0.17*	+/-0.48	-0.37*	+/-1	-0.14	0.12	-0.048	-7.2E-05
Thorium-232 (pCi/L)	4	-0.028*	+/-0.086	-0.07*	+/-0.12	-0.05	0.01	-0.1	-2E-05
Thorium-234 (pCi/L)	3	2.8	+/-0.60	1.5	+/-0.43	2.0	0.39	0.020	1.0E-03
Uranium-234 (pCi/L)	4	3.2	+/-0.7	1.2	+/-0.53	1.8	0.48	0.36	8.9E-04
Uranium-235 (pCi/L)	4	0.15*	+/-0.14	-0.043*	+/-0.079	0.039	0.040	0.0065	2.0E-05
Uranium-236 (pCi/L)	4	0.068*	+/-0.093	-0.023*	+/-0.059	0.036	0.020	0.0073	1.8E-05
Uranium-238 (pCi/L)	4	2.8	+/-0.6	1.5	+/-0.43	1.9	0.30	0.32	9.6E-04

(e) Not applicable
* Provisional Result

Table 4.12. Y-12 Plant Discharge Point 200, OUTFALL 200

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	55	9.232	0.27	1.9		0
IC 25 Ceriodaphnia, %	2	>100.0	>100.0	>100.0		0
IC 25 Fathead Minnows, %	2	>100.0	>100.0	>100.0		0
pH, Standard Units	54	8.1	7.2	d	9/ 6(e)	0
Total Residual Chlorine	19	0.28	<0.05	<0.1		0
Cadmium	15	<0.01	<0.001	<0.002	0.025	0
Dissolved Solids	4	546.0	214.0	311.5		0
Hexane Extractable Material	52	<6.5	<5.9	<6.1	15	0
Mercury	54	0.0026	0.0005	0.0009		0
Nitrate/Nitrite as Nitrogen	6	5.59	0.486	3.16		0
Lead	15	<0.1	<0.0002	<0.008	1.19	0
PCB, Total	6	0.0005U	0.0005J	0.0005JU		0
Uranium	14	0.0614	0.0078	0.023		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 4.13. Y-12 Plant Discharge Point 200, OUTFALL 200

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard Error	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	12	67.0	+/-6.9	1.0*	+/-3.9	17	5.4	e	4.3E-02
Beta activity (pCi/L)	12	17.0	+/-4.8	7.1	+/-3.6	11	0.93	e	2.9E-02
Cobalt-60 (pCi/L)	12	1.8*	+/-2.1	-1.7*	+/-2.2	0.25	0.34	0.0050	6.4E-04
Cesium-137 (pCi/L)	12	1.9*	+/-2.3	-1.1*	+/-2.1	-0.071	0.26	-0.0024	-1.8E-04
Radium-226 (pCi/L)	12	0.8	+/-1.7	-0.01*	+/-0.040	0.3	0.08	0.3	8E-04
Radium-228 (pCi/L)	12	2.1*	+/-1.1	-0.61*	+/-0.45	0.56	0.22	0.56	1.4E-03
Technetium-99 (pCi/L)	12	22.0	+/-8.1	-35.0*	+/-10	6.58	4.19	0.00660	1.70E-02
Thorium-228 (pCi/L)	12	0.15*	+/-0.28	-0.42*	+/-1.6	-0.091	0.052	-0.023	-2.4E-04
Thorium-230 (pCi/L)	12	0.33*	+/-0.91	-4.8*	+/-13	-0.48	0.40	-0.16	-1.2E-03
Thorium-232 (pCi/L)	12	0.031*	+/-0.14	-0.13*	+/-0.45	-0.019	0.013	-0.038	-4.9E-05
Thorium-234 (pCi/L)	7	17.0	+/-2.2	2.5	+/-0.55	9.0	2.0	0.090	2.3E-02
Tritium (pCi/L)	12	990.0	+/-520	-240.0*	+/-520	274.4	96.15	0.01370	7.100E-01
Uranium-234 (pCi/L)	12	50.0	+/-5	1.6	+/-0.45	9.2	4.0	1.8	2.4E-02
Uranium-235 (pCi/L)	12	1.5	+/-0.42	-0.0012*	+/-0.13	0.31	0.12	0.052	8.1E-04
Uranium-236 (pCi/L)	12	0.23	+/-0.17	0.001*	+/-0.051	0.08	0.02	0.02	2E-04
Uranium-238 (pCi/L)	12	17.0	+/-2.2	2.0	+/-0.46	7.0	1.4	1.2	1.8E-02

(e) Not applicable
* Provisional Result

Table 4.14. Y-12 Plant Discharge Point 502, WEST END TREATMENT FACILITY

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	9	0.065	0.031	0.054		0
pH, Std Unit	2	7.3	6.8	d	9/ 6(e)	0
Silver	3	<0.002	<0.0004	<0.0009	0.05	0
Cadmium	3	<0.005	<0.001	<0.003	0.15	0
Chromium	3	<0.02	0.0049	<0.01	1	0
Copper	3	0.0271	0.0163	0.0204	1	0
Cyanide	2	<0.01	<0.01	<0.01	1.2	0
Dissolved Solids	1	8700.0	8700.0	8700.0		0
Hexane Extractable Material	2	<6.3	<5.6	<6.0	15	0
Mercury	2	<0.0002	<0.0002	<0.0002		0
Lithium	2	3.32	3.27	3.30		0
Nickel	3	0.119	0.11	0.11	3.98	0
Nitrate/Nitrite as Nitrogen	2	6.59	5.63	6.11	100	0
Lead	3	0.0018	<0.001	<0.001	0.2	0
PCB, Total	2	0.0005U	0.0005U	0.0005U	0.001	0
Selenium	3	<0.02	0.0149	<0.02		0
Suspended Solids	2	3.4	2.4	2.9	40	0
Sum of TTO Analysis	1	0.015	0.015	0.015	2.13	0
Uranium	3	0.0202	0.009	0.01		0
Zinc	3	0.166	0.135	0.146	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.

Table 4.15. Y-12 Plant Discharge Point 502, WEST END TREATMENT FACILITY

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard Error	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	2	25.0*	+/-63	25.0*	+/-63	25.0	0.0	e	1.85E-03
Beta activity (pCi/L)	2	440.0	+/-86	440.0	+/-86	440.0	0.0	e	3.26E-02
Cobalt-60 (pCi/L)	1	-0.16*	+/-2.5	-0.16*	+/-2.5	-0.16		-0.0032	-1.19E-05
Cesium-137 (pCi/L)	1	6.1	+/-3.5	6.1	+/-3.5	6.1		0.2033	4.52E-04
Radium-226 (pCi/L)	1	0.23*	+/-0.28	0.23*	+/-0.28	0.23		0.23	1.71E-05
Radium-228 (pCi/L)	1	0.67*	+/-0.60	0.67*	+/-0.60	0.67		0.67	4.97E-05
Strontium-89/90 (pCi/L)	1	0.76*	+/-1.1	0.76*	+/-1.1	0.76		0.076	5.64E-05
Total Radium Alpha (pCi/L)	1	0.28*	+/-0.21	0.28*	+/-0.21	0.28		e	2.08E-05
Technetium-99 (pCi/L)	1	170.0	+/-12	170.0	+/-12	170.0		0.17	1.26E-02
Thorium-228 (pCi/L)	1	0.033*	+/-0.16	0.033*	+/-0.16	0.033		0.0082	2.45E-06
Thorium-230 (pCi/L)	1	-0.094*	+/-0.2	-0.094*	+/-0.2	-0.094		-0.0313	-6.97E-06
Thorium-232 (pCi/L)	1	0.014*	+/-0.058	0.014*	+/-0.058	0.014		0.028	1.04E-06
Thorium-234 (pCi/L)	1	3.9	+/-0.78	3.9	+/-0.78	3.9		0.039	2.89E-04
Uranium-234 (pCi/L)	1	2.0	+/-0.58	2.0	+/-0.58	2.0		0.4	1.48E-04
Uranium-235 (pCi/L)	1	-0.084*	+/-0.11	-0.084*	+/-0.11	-0.084		-0.014	-6.23E-06
Uranium-236 (pCi/L)	1	0.11*	+/-0.12	0.11*	+/-0.12	0.11		0.022	8.16E-06
Uranium-238 (pCi/L)	1	3.9	+/-0.78	3.9	+/-0.78	3.9		0.65	2.89E-04

(e) Not applicable
* Provisional Result

Table 4.16. Y-12 Plant Discharge Point 512, OUTFALL 512 (GWTF)

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	203	0.014	0.0005	0.007		0
pH, Std Unit	13	7.8	7.3	d	9/ 6(e)	0
Copper	13	<0.005	<0.002	<0.005		0
Lead	13	0.003	<0.0002	<0.0007		0
PCB, Total	5	0.0005U	0.0005U	0.0005U	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.

Table 4.17. Y-12 Plant Discharge Point 512, OUTFALL 512 (GWTF)

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard Error	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	5	10.0	+/-4	3.3*	+/-4.2	6.9	1.3	e	6.5E-05
Beta activity (pCi/L)	5	14.0	+/-4.7	7.0*	+/-4.1	10	1.3	e	9.4E-05
Cobalt-60 (pCi/L)	6	1.7*	+/-2.3	0.047*	+/-2	0.79	0.27	0.016	7.4E-06
Cesium-137 (pCi/L)	6	2.8*	+/-2.3	-1.5*	+/-1.9	0.66	0.64	0.022	6.2E-06
Radium-226 (pCi/L)	6	1.1	+/-0.85	-0.55*	+/-0.53	0.14	0.22	0.14	1.3E-06
Radium-228 (pCi/L)	6	1.4	+/-0.65	-0.22*	+/-0.48	0.58	0.26	0.58	5.4E-06
Strontium-89/90 (pCi/L)	6	3.8	+/-1.7	-0.032*	+/-1.8	1.1	0.56	0.11	1.0E-05
Total Radium Alpha (pCi/L)	6	1.1	+/-0.33	0.23*	+/-0.20	0.48	0.14	e	4.5E-06
Technetium-99 (pCi/L)	6	7.0*	+/-8.8	-10.0*	+/-8.9	-0.76	2.7	-0.00080	-7.1E-06
Thorium-228 (pCi/L)	6	0.062*	+/-0.2	-0.28*	+/-1.1	-0.057	0.050	-0.014	-5.4E-07
Thorium-230 (pCi/L)	6	-0.016*	+/-0.99	-0.21*	+/-0.41	-0.11	0.033	-0.036	-1.0E-06
Thorium-232 (pCi/L)	6	0.1*	+/-0.12	-0.062*	+/-0.17	0.01	0.02	0.02	1.E-07
Thorium-234 (pCi/L)	5	5.1	+/-0.85	1.6	+/-0.39	3.6	0.58	0.036	3.4E-05
Uranium-234 (pCi/L)	6	4.4	+/-0.83	0.53*	+/-0.48	1.8	0.58	0.36	1.7E-05
Uranium-235 (pCi/L)	6	0.32	+/-0.21	-0.029*	+/-0.097	0.087	0.051	0.014	8.2E-07
Uranium-236 (pCi/L)	6	0.1*	+/-0.13	-0.016*	+/-0.045	0.04	0.02	0.01	4E-07
Uranium-238 (pCi/L)	6	5.1	+/-0.85	1.2	+/-0.44	3.2	0.62	0.53	3.0E-05

(e) Not applicable
* Provisional Result

Table 4.18. Y-12 Plant Discharge Point 520, OUTFALL 520

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
pH, Standard Units	23	8.0	6.0	d	9/ 6(e)	0
Dissolved Solids	23	51.0	<1.0	<11		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 4.19. Y-12 Plant Discharge Point 520, OUTFALL 520

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard Error	Percentage of DCG	Total Curies
Uranium-234 (pCi/L)	1	-0.0002*	+/-0.33	-0.0002*	+/-0.33	-0.0002	d	0.0	f
Uranium-235 (pCi/L)	1	-0.012*	+/-0.069	-0.012*	+/-0.069	-0.012	d	-0.002	f
Uranium-238 (pCi/L)	1	-0.018*	+/-0.096	-0.018*	+/-0.096	-0.018	d	-0.003	f

(e) Not applicable
(f) No flow data
* Provisional Result

Table 4.20. Y-12 Plant Discharge Point 551, CENTRAL MERCURY TREATMENT UNIT

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	364	0.015	0.001	0.006		0
pH, Standard Units	54	7.5	6.8	d	9/ 6(e)	0
Mercury	52	<0.0002	<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.

Table 4.21. Y-12 Plant Discharge Point 551, CENTRAL MERCURY TREATMENT UNIT

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard Error	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	6	11.0	+/-3.7	-1.3*	+/-4.5	2.7	1.9	e	2.1E-05
Beta activity (pCi/L)	6	6.6	+/-3.2	-2.0*	+/-4.5	3.4	1.4	e	2.6E-05
Cobalt-60 (pCi/L)	6	1.6*	+/-2.1	-0.043*	+/-1.8	0.84	0.22	0.017	6.6E-06
Cesium-137 (pCi/L)	6	3.7*	+/-2.1	-0.4*	+/-2.3	0.6	0.6	0.02	5E-06
Radium-226 (pCi/L)	6	0.95	+/-0.63	-0.17*	+/-0.17	0.40	0.15	0.40	3.1E-06
Radium-228 (pCi/L)	6	1.21	+/-0.54	-0.79*	+/-0.88	0.30	0.26	0.30	2.3E-06
Strontium-89/90 (pCi/L)	6	2.3*	+/-2.5	-0.8*	+/-1.9	0.9	0.5	0.09	7E-06
Total Radium Alpha (pCi/L)	6	0.89	+/-0.28	0.2*	+/-0.13	0.53	0.1076	e	4.12E-06
Technetium-99 (pCi/L)	6	15.0	+/-9.4	-51.0*	+/-10	-5.00	9.52	-0.00500	-3.890E-05
Thorium-228 (pCi/L)	6	0.29*	+/-0.28	-0.32*	+/-0.9	0.022	0.080	0.0054	1.7E-07
Thorium-230 (pCi/L)	6	0.0001*	+/-0.4	-0.38*	+/-0.93	-0.2	0.05	-0.06	-1E-06
Thorium-232 (pCi/L)	6	0.049*	+/-0.099	-0.041*	+/-0.14	0.0063	0.012	0.012	4.9E-08
Thorium-234 (pCi/L)	3	0.66	+/-0.3	0.19*	+/-0.19	0.36	0.15	0.0036	2.8E-06
Uranium-234 (pCi/L)	6	0.76*	+/-0.48	0.17*	+/-0.45	0.50	0.087	0.10	3.9E-06
Uranium-235 (pCi/L)	6	0.1*	+/-0.14	-0.037*	+/-0.11	0.02	0.02	0.003	2E-07
Uranium-236 (pCi/L)	6	0.022*	+/-0.081	-0.013*	+/-0.068	0.0072	0.0061	0.0014	5.6E-08
Uranium-238 (pCi/L)	6	0.69	+/-0.31	0.19*	+/-0.19	0.40	0.090	0.067	3.1E-06

(e) Not applicable
* Provisional Result

Table 4.22. Y-12 Plant Category I Outfalls

From: 2007/01/01 To: 2007/12/31

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
003	Flow, mgd	2	0.1522	0.0076	0.080	d	d
	pH, Standard Units	2	7.8	7.5	d	9/ 6(e)	0
006	Flow, mgd	1	00228	0.0228	0.0228	d	d
	pH, Standard Units	1	7.9	7.9	d	9/ 6(e)	0
007	Flow, mgd	2	0.0187	0.0133	0.0160	d	d
	pH, Standard Units	2	7.9	7.4	d	9/ 6(e)	0
033	Flow, mgd	2	0.0152	0.0046	0.0099	d	d
	pH, Standard Units	2	7.7	7.6	d	9/ 6(e)	0
041	Flow, mgd	1	0.0004	0.0004	0.0004	d	d
	pH, Standard Units	1	7.8	7.8	d	9/ 6(e)	0
044	Flow, mgd	1	0.0076	0.0076	0.0076	d	d
	pH, Standard Units	1	7.9	7.9	d	9/ 6(e)	0
045	Flow, mgd	1	0.0228	0.0228	0.0228	d	d
	pH, Standard Units	1	8.0	8.0	d	9/ 6(e)	0
046	Flow, mgd	1	0.0095	0.0095	0.0095	d	d
	pH, Standard Units	1	7.8	7.8	d	9/ 6(e)	0
057	Flow, mgd	1	0.0114	0.0114	0.0114	d	d
	pH, Standard Units	1	7.8	7.8	d	9/ 6(e)	0
058	No Flow						
062	No Flow						
063	Flow, mgd	1	0.019	0.019	0.019	d	d
	pH, Standard Units	1	7.9	7.9	d	9/ 6(e)	0

Table 4.22 (continued)

064	Flow, mgd	1	0.0152	0.0152	0.0152	d	d
	pH, Standard Units	1	8.1	8.1	d	9/ 6(e)	0
086	Flow, mgd	1	0.0095	0.0095	0.0095	d	d
	pH, Standard Units	1	7.8	7.8	d	9/ 6(e)	0
087	Flow, mgd	1	0.019	0.019	0.019	d	d
	pH, Standard Units	1	7.8	7.8	d	9/ 6(e)	0
102	Flow, mgd	2	0.196	0.0457	0.121	d	d
	pH, Standard Units	2	7.9	7.3	d	9/ 6(e)	0
110	Flow, mgd	1	0.0057	0.0057	0.0057	d	d
	pH, Standard Units	1	7.9	7.9	d	9/ 6(e)	0
134	Flow, mgd	1	0.0002	0.0002	0.0002	d	d
	pH, Standard Units	1	7.8	7.8	d	9/ 6(e)	0
S18	Flow, mgd	3	1.885	0.2283	1.111	d	d
	pH, Standard Units	2	7.9	7.5	d	9/ 6(e)	0
S26	Flow, mgd	2	0.108	0.025	0.066	d	d
	pH, Standard Units	2	7.9	7.4	d	9/ 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 4.23. Y-12 Plant Category II Outfalls

From: 2007/01/01 To: 2007/12/31

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
002	Flow, mgd	3	0.0821	0.0228	0.0590	d	d
	pH, Standard Units	3	7.9	7.6	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
004	Flow, mgd	3	0.023	0.0019	0.0098	d	d
	pH, Standard Units	3	8.1	7.9	d	9/ 6(e)	0
	Total Residual Chlorine	3	<0.05	<0.05	<0.05	0.5	0
014	Flow, mgd	3	0.0288	0.0086	0.020	d	d
	pH, Standard Units	3	8.0	7.3	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
016	Flow, mgd	3	0.661	0.0004	0.2	d	d
	pH, Standard Units	3	7.8	7.6	d	9/ 6(e)	0
	Total Residual Chlorine	3	<0.05	<0.05	<0.05	0.5	0
019	Flow, mgd	3	0.108	0.0012	0.039	d	d
	pH, Standard Units	3	7.9	7.8	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
020	Flow, mgd	2	0.216	0.0091	0.11	d	d
	pH, Standard Units	2	8.1	7.7	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
047	Flow, mgd	3	0.0864	0.0043	0.033	d	d
	pH, Standard Units	3	8.0	7.4	d	9/ 6(e)	0
	Total Residual Chlorine	3	<0.05	<0.05	<0.05	0.5	0
048	Flow, mgd	3	0.0576	0.0007	0.02	d	d
	pH, Standard Units	3	7.9	7.5	d	9/64(e)	0
	Total Residual Chlorine	3	<0.05	<0.05	<0.05	0.5	0

Table 4.23 (continued)

054	Flow, mgd	3	0.0086	0.0001	0.004	d	d
	pH, Standard Units	3	8.1	7.3	d	9/ 6(e)	0
	Total Residual Chlorine	3	<0.05	<0.05	<0.05	0.5	0
067	Flow, mgd	4	9.317	0.0072	2.3	d	d
	pH, Standard Units	4	7.9	7.7	d	9/ 6(e)	0
	Total Residual Chlorine	3	<0.05	<0.05	<0.05	0.5	0
083	Flow, mgd	1	0.0864	0.0864	0.0864	d	d
	pH, Standard Units	1	7.2	7.2	d	9/ 6(e)	0
	Total Residual Chlorine	1	<0.05	<0.05	<0.05	0.5	0
088	Flow, mgd	1	0.023	0.023	0.023	d	d
	pH, Standard Units	1	7.5	7.5	d	9/ 6(e)	0
	Total Residual Chlorine	1	<0.05	<0.05	<0.05	0.5	0
099	Flow, mgd	3	0.0228	0.0068	0.018	d	d
	pH, Standard Units	3	8.0	7.7	d	9/ 6(e)	0
	Total Residual Chlorine	3	<0.05	<0.05	<0.05	0.5	0
126	Flow, mgd	1	0.0014	0.0014	0.0014	d	d
	pH, Standard Units	1	7.6	7.6	d	9/ 6(e)	0
	Total Residual Chlorine	1	<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 4.24. Y-12 Plant Category III Outfalls

From: 2007/01/01 To: 2007/12/31

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
034	Flow, mgd	3	0.54	0.1065	0.34	d	d
	pH, Standard Units	3	7.5	7.1	d	9/ 6(e)	0
	Total Residual Chlorine	3	0.11	<0.05	<0.07	0.5	0
042	Flow, mgd	4	0.01	0.0001	0.004	d	d
	pH, Standard Units	3	7.9	7.6	d	9/ 6(e)	0
	Total Residual Chlorine	3	<0.05	<0.05	<0.05	0.5	0
071	Flow, mgd	3	0.072	0.0046	0.034	d	d
	pH, Standard Units	3	7.9	7.7	d	9/ 6(e)	0
	Total Residual Chlorine	3	0.979	<0.05	<0.09	0.5	0
113	Flow, mgd	2	0.0216	0.0046	0.013	d	d
	pH, Standard Units	2	8.0	7.1	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
114	Flow, mgd	3	0.0114	0.0046	0.0084	d	d
	pH, Standard Units	3	8.1	8.0	d	9/ 6(e)	0
	Total Residual Chlorine	3	<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 4.25. Y-12 Plant Discharge Point S06, INSTREAM BEAR CREEK, DOWNSTREAM OF TRIBUTARY

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	3	0.812	0.0762	0.336		0
pH, Standard Units	3	7.5	7.1	d	9/ 6(e)	0
Silver	2	<0.0004	<0.0004	<0.0004		0
Aluminum	2	6.79	<0.2	<3.		0
Arsenic	2	<0.02	<0.002	<0.01		0
Boron	2	0.106	<0.1	<0.1		0
Barium	2	0.31	0.243	0.28		0
Beryllium	2	0.0003	<0.0002	<0.0003		0
Cadmium	2	0.0169	0.0042	0.011		0
Cobalt	2	0.0072	0.0014	0.0043		0
Chromium	2	0.0066	<0.004	<0.005		0
Copper	2	0.0097	<0.002	<0.006		0
Lithium	2	0.0114	<0.01	<0.01		0
Magnesium	2	21.8	18.4	20.1		0
Molybdenum	2	0.0005	<0.0004	<0.0005		0
Nickel	2	0.0639	0.022	0.043		0
Nitrate/Nitrite as Nitrogen	2	67.0	58.5	62.8		0
Lead	2	0.0068	<0.0002	<0.004		0
Antimony	2	<0.001	<0.001	<0.001		0
Strontium	2	0.45	0.344	0.40		0
Thallium	2	<0.0002	<0.0002	<0.0002		0
Vanadium	2	<0.02	<0.02	<0.02		0
Zinc	2	0.188	0.0048	0.096		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 4.26. Y-12 Plant Discharge Point SS6, SANITARY SEWER STATION 6

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, gpd	365	1180000.0	248000.0	562739.8	d	d
pH, Standard Units	13	7.7	7.1	d	9/ 6(e)	0
1,1,1-Trichloroethane	3	0.005U	0.005U	0.005U	d	d
Silver	16	0.0037	<0.0004	<0.001	0.1	0
Arsenic	16	0.0024	<0.002	<0.002	0.025	0
Beryllium	16	<0.0002	<0.0002	<0.0002	d	d
Benzene	3	0.005U	0.005U	0.005U		0
Biochemical Oxygen Demand	13	83.9	29.0	54.6	300	0
Carbon tetrachloride	3	0.005U	0.005U	0.005U	d	d
Cadmium	16	<0.001	<0.001	<0.001	0.005	0
Chloroform	3	0.005J	0.004J	0.004J	d	d
Tetrachloroethene	3	0.003J	0.002J	0.002J	d	d
Cobalt	16	0.0031	0.0002	0.001	d	d
Chromium	16	0.0105	<0.004	<0.005	0.075	0
Copper	13	0.0637	0.0185	0.0364	0.21	0
Cyanide	13	0.0133	<0.01	<0.01	0.062	0
Ethylbenzene	3	0.005U	0.005U	0.005U		0
Iron	13	1.93	0.152	0.752	30	0
Hexane Extractable Material	13	9.59	<5.5	<7.1	50	0
Mercury	13	0.0073	0.0011	0.0036	0.035	0
Kjeldahl Nitrogen	13	18.3	7.44	13.7	90	0
Methylene chloride	3	0.005U	0.005U	0.005U		0
Manganese	16	0.0504	0.0222	0.0318	d	d
Molybdenum	15	0.0366	0.0035	0.012		0
Nickel	16	0.0088	0.0031	0.0061	0.032	0
Lead	16	0.0103	<0.0002	<0.002	0.074	0
Phenols - Total Recoverable	13	<0.025	<0.005	<0.01	0.3	0

Table 4.26 (continued)

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Selenium	16	<0.004	<0.004	<0.004		0
Suspended Solids	13	130.0	25.8	74.5	300	0
trans-1,2-Dichloroethene	3	0.005U	0.005U	0.005U	d	d
Thorium	16	<0.0004	<0.0004	<0.0004	d	d
Toluene	3	0.005U	0.005U	0.005U		0
Trichloroethene	3	0.005U	0.005U	0.005U		0
Zinc	16	0.121	0.0305	0.0814	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.

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

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard Error	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	52	32.0	+/-11	-4.0*	+/-9.5	5.4	0.78	e	4.2E-03
Beta activity (pCi/L)	52	23.0	+/-7.7	4.1*	+/-3.6	9.8	0.63	e	7.6E-03
Cobalt-60 (pCi/L)	1	-1.6*	+/-2.2	-1.6*	+/-2.2	-1.6		-0.032	-1.2E-03
Cesium-137 (pCi/L)	1	1.7*	+/-2.1	1.7*	+/-2.1	1.7		0.057	1.3E-03
Radium-228 (pCi/L)	1	17.0	+/-11	17.0	+/-11	17.0		17.0	1.32E-02

(e) Not applicable
* Provisional Result

Table 4.28. Y-12 Plant Discharge Point S17, UNNAMED TRIBUTARY TO THE CLINCH RIVER

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard Error	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	1	1.1*	+/-2.8	1.1*	+/-2.8	1.1		e	f
Beta activity (pCi/L)	1	8.2	+/-3.2	8.2	+/-3.2	8.2		e	f
Cobalt-60 (pCi/L)	1	-0.25*	+/-2.2	-0.25*	+/-2.2	-0.25		-0.0050	f
Cesium-137 (pCi/L)	1	0.59*	+/-2.3	0.59*	+/-2.3	0.59		0.020	f
Radium-226 (pCi/L)	1	-0.12*	+/-0.26	-0.12*	+/-0.26	-0.12		-0.12	f
Radium-228 (pCi/L)	1	0.51*	+/-0.52	0.51*	+/-0.52	0.51		0.51	f
Strontium-89/90 (pCi/L)	1	1.7	+/-1	1.7	+/-1	1.7		0.17	f
Total Radium Alpha (pCi/L)	1	0.23*	+/-0.17	0.23*	+/-0.17	0.23		e	f
Technetium-99 (pCi/L)	1	3.6*	+/-8.8	3.6*	+/-8.8	3.6		0.0036	f
Thorium-228 (pCi/L)	1	-0.07*	+/-0.45	-0.07*	+/-0.45	-0.07		-0.02	f
Thorium-230 (pCi/L)	1	-0.15*	+/-0.51	-0.15*	+/-0.51	-0.15		-0.050	f
Thorium-232 (pCi/L)	1	-0.025*	+/-0.089	-0.025*	+/-0.089	-0.025		-0.050	f
Thorium-234 (pCi/L)	1	0.18*	+/-0.21	0.18*	+/-0.21	0.18		0.0018	f
Tritium (pCi/L)	1	-150.0*	+/-570	-150.0*	+/-570	-150.0		-0.0075	f
Uranium-234 (pCi/L)	1	0.86	+/-0.38	0.86	+/-0.38	0.86		0.17	f
Uranium-235 (pCi/L)	1	0.03*	+/-0.08	0.03*	+/-0.08	0.03		0.005	f
Uranium-236 (pCi/L)	1	0.0001*	+/-0.066	0.0001*	+/-0.066	0.0001		0.0	f
Uranium-238 (pCi/L)	1	0.18*	+/-0.21	0.18*	+/-0.21	0.18		0.030	f

(e) Not applicable
(f) Flow data not obtained
* Provisional Result

Table 4.29. Y-12 Plant Discharge Point S19, S19, ROGER'S QUARRY

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	1	0.216	0.216	0.216		0
pH, Standard Units	1	7.6	7.6	d	9/ 6(e)	0
Silver	1	<0.0004	<0.0004	<0.0004		0
Aluminum	1	<0.2	<0.2	<0.2		0
Arsenic	1	0.0057	0.0057	0.0057		0
Boron	1	<0.1	<0.1	<0.1		0
Barium	1	0.0562	0.0562	0.0562		0
Beryllium	1	<0.0002	<0.0002	<0.0002		0
Cadmium	1	<0.001	<0.001	<0.001		0
Cobalt	1	<0.0002	<0.0002	<0.0002		0
Chromium	1	<0.004	<0.004	<0.004		0
Copper	1	<0.002	<0.002	<0.002		0
Dissolved Solids	1	173.0	173.0	173.0		0
Lithium	1	0.0141	0.0141	0.0141		0
Magnesium	1	11.6	11.6	11.6		0
Molybdenum	1	0.0013	0.0013	0.0013		0
Nickel	1	<0.002	<0.002	<0.002		0
Lead	1	<0.0002	<0.0002	<0.0002		0
Antimony	1	<0.001	<0.001	<0.001		0
Strontium	1	0.238	0.238	0.238		0
Suspended Solids	1	<1.0	<1.0	<1.0		0
Thallium	1	<0.0002	<0.0002	<0.0002		0
Vanadium	1	<0.02	<0.02	<0.02		0
Zinc	1	<0.002	<0.002	<0.002		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 4.30. Y-12 Plant Discharge Point S24, BEAR CREEK KILOMETER 9.4

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard Error	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	4	50.0	+/-5.9	27.0	+/-5.3	35.2	5.07	e	e
Beta activity (pCi/L)	4	66.0	+/-6.8	30.0	+/-4.8	47.0	7.65	e	e
Cobalt-60 (pCi/L)	4	1.6*	+/-2.2	-0.35*	+/-2.2	0.64	0.42	0.013	e
Cesium-137 (pCi/L)	4	1.2*	+/-2.4	-0.57*	+/-2.3	0.62	0.40	0.021	e
Radium-226 (pCi/L)	4	0.47	+/-0.45	0.072*	+/-0.13	0.26	0.093	0.26	e
Radium-228 (pCi/L)	4	2.5	+/-0.72	1.2*	+/-0.66	2.0	0.31	2.0	e
Strontium-89/90 (pCi/L)	4	7.3	+/-2.8	0.95*	+/-2	4.4	1.5	0.44	e
Total Radium Alpha (pCi/L)	4	0.45	+/-0.20	-0.34*	+/-0.13	0.16	0.17	e	e
Technetium-99 (pCi/L)	4	73.0	+/-11	45.0	+/-9.7	54.5	6.29	0.0545	e
Thorium-228 (pCi/L)	4	0.058*	+/-0.27	-0.28*	+/-1.1	-0.066	0.074	-0.017	e
Thorium-230 (pCi/L)	4	-0.018*	+/-0.39	-0.25*	+/-0.6	-0.12	0.049	-0.038	e
Thorium-232 (pCi/L)	4	0.023*	+/-0.13	-0.013*	+/-0.094	0.0066	0.0090	0.013	e
Thorium-234 (pCi/L)	2	24.0	+/-2.8	24.0	+/-2.8	24.0	0.0	0.240	e
Tritium (pCi/L)	4	300.0*	+/-560	-330.0*	+/-530	-82.5	135.	-0.0041	e
Uranium-234 (pCi/L)	5	22.0	+/-2.5	5.34	1.08	12.4	2.96	2.47	e
Uranium-235 (pCi/L)	5	1.7	+/-0.44	0.21	+/-0.19	0.78	0.32	0.13	e
Uranium-236 (pCi/L)	4	0.66	+/-0.25	0.16*	+/-0.13	0.34	0.11	0.068	e
Uranium-238 (pCi/L)	42	62.0	+/-6.1	9.54	1.54	21.0	1.72	3.51	e

(e) Not applicable
* Provisional Result

Table 4.31. Y-12 Plant Discharge Point S24, BEAR CREEK KILOMETER 9.4

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
pH, Standard Units	4	8.1	7.4	d	9/ 6(e)	0
Silver	4	<0.0004	<0.0004	<0.0004		0
Aluminum	4	2.15	0.252	0.874		0
Arsenic	4	<0.002	<0.002	<0.002		0
Boron	4	1.13	0.166	0.586		0
Barium	4	0.108	0.085	0.10		0
Beryllium	4	<0.0002	<0.0002	<0.0002		0
Cadmium	4	<0.001	<0.001	<0.001		0
Cobalt	4	0.0012	0.0003	0.0006		0
Chromium	4	<0.004	<0.004	<0.004		0
Copper	4	<0.002	<0.002	<0.002		0
Mercury	4	<0.0002	<0.0002	<0.0002		0
Lithium	4	0.155	0.0311	0.0801		0
Magnesium	4	14.4	8.2	11.		0
Molybdenum	4	0.0007	<0.0004	<0.0005		0
Total Nitrogen	4	10.6	1.0	7.8		0
Nickel	4	0.0039	0.0028	0.0033		0
Nitrate/Nitrite as Nitrogen	4	10.6	1.0	7.6		0
Phosphorus	4	<0.5	<0.5	<0.5		0
Lead	4	0.0012	<0.0002	<0.0006		0
PCB, Total	4	0.0005U	0.0005U	0.0005U		0
Antimony	4	<0.001	<0.001	<0.001		0
Strontium	4	0.182	0.154	0.168		0
Suspended Solids	4	14.8	1.0	5.1		0
Thallium	4	<0.0002	<0.0002	<0.0002		0
Uranium	4	0.229	0.0553	0.143		0
Vanadium	4	<0.02	<0.02	<0.02		0
Zinc	4	0.0063	0.0021	0.0037		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 4.32. Y-12 Plant Discharge Point 94221, SWHISS STATION 9422-1

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard Error	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	17	11.0	+/-3.3	-2.0*	+/-3.4	4.6	0.87	e	5.1E-02
Beta activity (pCi/L)	17	21.0	+/-4.7	-1.5*	+/-4.6	6.7	1.5	e	7.4E-02
Cobalt-60 (pCi/L)	17	1.1*	+/-2	-1.2*	+/-2.2	0.21	0.18	0.0043	2.4E-03
Cesium-137 (pCi/L)	17	1.5*	+/-2.3	-1.4*	+/-2.2	0.065	0.18	0.0022	7.2E-04
Radium-226 (pCi/L)	17	0.936	+/-0.663	-0.53*	+/-2.1	0.19	0.088	0.19	2.1E-03
Radium-228 (pCi/L)	17	2.8*	+/-1.5	-0.79*	+/-0.72	0.68	0.24	0.68	7.5E-03
Strontium-89/90 (pCi/L)	17	6.3	+/-3.4	-0.098*	+/-0.83	1.8	0.42	0.18	2.0E-02
Total Radium Alpha (pCi/L)	17	2.1	+/-0.57	-0.034*	+/-0.19	0.40	0.12	e	4.4E-03
Technetium-99 (pCi/L)	17	20.0	+/-10	-46.0*	+/-11	2.02	4.33	0.00200	2.24E-02
Thorium-228 (pCi/L)	17	1.9	+/-0.7	-0.28*	+/-1.1	0.074	0.12	0.018	8.1E-04
Thorium-230 (pCi/L)	17	0.59*	+/-0.76	-0.32*	+/-0.8	-0.034	0.053	-0.011	-3.8E-04
Thorium-232 (pCi/L)	17	0.045*	+/-0.079	-0.15*	+/-0.17	-0.0095	0.010	-0.019	-1.0E-04
Thorium-234 (pCi/L)	11	5.5	+/-0.93	0.44*	+/-0.27	1.9	0.48	0.020	2.2E-02
Tritium (pCi/L)	17	510.0*	+/-610	-1300.0*	+/-620	-88.35	131.1	-0.004400	-9.790E-01
Uranium-234 (pCi/L)	17	6.2	+/-1.1	0.26*	+/-0.45	1.5	0.34	0.30	1.6E-02
Uranium-235 (pCi/L)	17	0.27	+/-0.2	-0.02*	+/-0.099	0.07	0.02	0.01	8E-04
Uranium-236 (pCi/L)	17	0.076*	+/-0.096	-0.029*	+/-0.065	0.017	0.0072	0.0034	1.9E-04
Uranium-238 (pCi/L)	17	5.5	+/-0.93	0.44*	+/-0.27	1.7	0.34	0.28	1.9E-02

(e) Not applicable
* Provisional Result

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Table 4.33. Y-12 Plant Discharge Point 94221, SWHISS STATION 9422-1

From: 2007/01/01 To: 2007/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Dissolved Oxygen	53	10.6	7.8	9.0		0
Flow, mgd	365	31.235	6.758	8.019		0
pH, Standard Units	261	8.7	7.5	d	9/ 6(e)	0
Temperature, deg C	54	22.5	9.0	16		0
Silver	55	<0.0005	<0.0004	<0.0004		0
Aluminum	53	1.39	<0.2	<0.3		0
Arsenic	55	<0.0023	<0.002	<0.002		0
Boron	53	<0.1	<0.1	<0.1		0
Barium	53	0.052	0.0387	0.043		0
Beryllium	55	<0.0002	<0.0002	<0.0002		0
Cadmium	55	<0.0012	<0.001	<0.001		0
Cobalt	55	0.003	<0.0002	<0.0004		0
Chromium	55	<0.0047	<0.004	<0.004		0
Copper	55	0.0069	<0.002	<0.004		0
Mercury	53	0.0019	0.0001	<0.0003		0
Lithium	53	0.0297	<0.01	<0.01		0
Magnesium	53	13.2	9.17	11.4		0
Molybdenum	55	0.0132	0.005	0.008		0
Nickel	55	0.0034	<0.002	<0.002		0
Nitrate/Nitrite as Nitrogen	53	1.53	<0.05	<0.5		0
Lead	55	0.0052	<0.0002	<0.0008		0
PCB, Total	1	0.0005U	0.0005U	0.0005U		0
Phosphate as Phosphorus	53	0.347	<0.31	<0.31		0
Antimony	55	<0.0012	<0.001	<0.001		0
Strontium	53	0.149	0.107	0.130		0
Suspended Solids	53	35.2	1.05	8.19		0
Thallium	55	<0.0002	<0.0002	<0.0002		0
Vanadium	53	<0.02	<0.02	<0.02		0
Zinc	55	0.0368	<0.002	<0.01		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 4.34. CONSTITUENTS DETECTED IN GROUNDWATER AT THE Y-12 COMPLEX – 2007

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME = BC				AREA NAME = Bear Creek Burial Grounds WMA				
1,1,1-Trichloroethane	ug/L	32	8	1700 D	7	292.7500	200	2
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	18	4	720 D	57	326.7500	NR	NA
1,1,2-Trichloroethane	ug/L	28	3	6	1 J	4.3333	5	2
1,1-Dichloroethane	ug/L	32	16	4100 D	3 J	681.1250	NR	NA
1,1-Dichloroethene	ug/L	28	13	320 D	2 J	102.6154	7	12
1,2-Dichloroethane	ug/L	28	8	21	1 J	5.2500	5	2
1,2-Dichloroethene	ug/L	26	15	6600 D	2 J	803.6000	NR	NA
1,4-Dioxane	ug/L	3	2	130	43	86.5000	NR	NA
Acetone	ug/L	32	2	22	1 J	11.5000	NR	NA
Aldrin	ug/L	4	1	0.013 J	0.013 J	0.0130		0
Alkalinity	mg/L	18	18	724	16.8	343.6000	NR	NA
Aluminum, ICAP	mg/L	22	6	0.317	0.0404	0.2332	0.2	5
Arsenic, ICAP	mg/L	22	0				0.05	0
Arsenic, PMS	mg/L	18	2	0.0148	0.0119	0.0134	0.05	0
Barium, ICAP	mg/L	22	22	0.851	0.0341	0.1900	2	0
Benzene	ug/L	32	11	2200 D	1 J	348.9091	5	7
Bicarbonate	mg/L	18	18	582	16.8	298.0444	NR	NA
Bis(2-ethylhexyl)phthalate	ug/L	4	1	1 J	1 J	1.0000	NR	NA
Boron, ICAP	mg/L	22	15	13.7	0.266	1.8145	NR w	NA
Cadmium, ICAP	mg/L	22	0				0.005	0
Cadmium, PMS	mg/L	18	1	0.0054	0.0054	0.0054	0.005	1
Calcium, ICAP	mg/L	22	22	149	0.883	39.4888	NR k	NA
Carbonate	mg/L	18	4	377	69.7	205.1750	NR	NA
Chloride	mg/L	18	18	83.5	1.08	24.4889	250	0
Chloroethane	ug/L	32	7	33	2 J	9.8571	NR	NA
Chloroform	ug/L	32	2	72	23	47.5000	100	0
Chromium, ICAP	mg/L	22	2	0.0436	0.0296	0.0366	0.1 z	0
Chromium, PMS	mg/L	18	4	0.0404	0.0108	0.0265	0.1	0
cis-1,2-Dichloroethene	ug/L	32	17	6600 D	2 J	947.0000	70	7
Copper, ICAP	mg/L	22	1	0.0051	0.0051	0.0051	1.3	0
Curium-245	pCi/L	4	1	0.31	0.31	0.3100	1.2	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Curium-246	pCi/L	4	1	0.31		0.31		0.3100	1.2		0
Curium-247	pCi/L	4	2	0.26	J	0.11	J	0.1850	1.2		0
Curium-248	pCi/L	4	1	0.14	J	0.14	J	0.1400	0.32		0
Dichlorodifluoromethane	ug/L	18	3	28		5		17.3333	NR		NA
Di-n-butyl phthalate	ug/L	4	1	0.6	J	0.6	J	0.6000	NR		NA
Endrin aldehyde	ug/L	4	1	0.013	J	0.013	J	0.0130			0
Ethyl Benzene	ug/L	32	2	4	J	4	J	4.0000	700		0
Flouride	mg/L	18	10	5.6		0.118		2.9416			0
Gross Alpha Activity	pCi/L	20	9	26		2.1		8.6111	15		2
Gross Beta Activity	pCi/L	20	3	20		10		15.6667	50		0
Indeno(1,2,3-cd)pyrene	ug/L	4	1	0.7		0.7		0.7000			0
Iodine-129	pCi/L	4	1	2.56	J	2.56	J	2.5600	20		0
Iron, ICAP	mg/L	22	17	0.951		0.0536		0.2568	0.3		5
Lead, ICAP	mg/L	22	1	0.0033		0.0033		0.0033	0.015		0
Lead, PMS	mg/L	18	13	0.0288		0.00086		0.0074	0.015		2
Lithium, ICAP	mg/L	22	18	0.396		0.019		0.0997	NR	w	NA
Magnesium, ICAP	mg/L	22	20	17.9		0.226		5.4584	NR	k	NA
Manganese, ICAP	mg/L	22	11	0.81		0.0039		0.2476	0.05		5
Mercury, CVAA	mg/L	22	0						0.002		0
Nickel, ICAP	mg/L	22	3	0.0649		0.00059	*	0.0399	0.1	z	0
Nickel, PMS	mg/L	18	8	0.0714		0.00897		0.0327	0.1		0
Nitrate as Nitrogen	mg/L	18	5	2.02		0.0384		0.5436	10		0
Np-237	pCi/L	4	1	0.11	J	0.11	J	0.1100	1.2		0
Plutonium-242	pCi/L	4	1	0.12	J	0.12	J	0.1200	1.2		0
Potassium, ICAP	mg/L	22	9	3		1.42		2.2178	NR		NA
Radium-226	pCi/L	4	2	0.16	J	0.12	J	0.1400	4		0
Sodium, ICAP	mg/L	22	22	384		1.99		134.3032	NR	k	NA
Strontium, ICAP	mg/L	22	22	0.399		0.0178		0.1739	NR	w	NA
Sulfate	mg/L	18	18	27.4		1.32		11.2728	250		0
Tetrachloroethene	ug/L	32	16	17000	D	2	J	2457.6875	5		14
Thallium, ICAP	mg/L	22	0						0.002		0
Thallium, PMS	mg/L	18	2	0.00074		0.000515		0.0006	0.002		0
Thorium-230	pCi/L	4	0						12		0
Thorium-234	pCi/L	4	1	0.19	J	0.19	J	0.1900	400		0
Titanium, ICAP	mg/L	22	1	0.0105		0.0105		0.0105	NR		NA
Toluene	ug/L	32	4	46		6		22.5000	1000		0
Total Dissolved Solids	mg/L	26	26	891		34		362.3462	500		7
Total Suspended Solids	mg/L	26	11	44		2		10.2727	NR		NA
Total Xylene	ug/L	32	4	15		4	J	9.5000	10000		0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
trans-1,2-Dichloroethene	ug/L	28	12	69	2 J	16.0833	100	0
Trichloroethene	ug/L	32	16	4500 D	0.4 J	770.8375	5	13
Trichlorofluoromethane	ug/L	18	1	13	13	13.0000	NR	NA
Tritium	pCi/L	4	1	562	562	562.0000	20000	0
Turbidity	NTU	18	18	8.07	0.088	1.7652	1	9
Uranium, ICAP	mg/L	22	0				0.03	0
Uranium, PMS	mg/L	28	4	0.0456	0.0013	0.0129	0.03	1
Uranium-232	pCi/L	4	1	0.06 J	0.06 J	0.0600	4	0
Uranium-233/234	pCi/L	5	4	0.51	0.45	0.4725	20	0
Uranium-238	pCi/L	6	1	0.19 J	0.19 J	0.1900	24	0
Vinyl Chloride	ug/L	32	13	1400 D	5	212.3077	2	13
Zinc, ICAP	mg/L	22	3	0.0192	0.0065	0.0107	5	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =BC				AREA NAME = EMWMF				
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ug/L	46	2	0 J	0 J	0.0000		0
Actinium-227	pCi/L	46	6	0.24 J	0.15 J	0.1883	0.4	0
Aldrin	ug/L	45	9	0.02 J	0.01 J	0.0154		0
Aluminum, ICAP	mg/L	46	29	2.31	0.0253	0.5195	0.2	19
Americium-241	pCi/L	46	5	0.21 J	0.14 J	0.1700	1.2	0
Americium-243	pCi/L	46	10	0.4	0.13 J	0.2600	1.2	0
Arsenic, ICAP	mg/L	46	2	0.0041	0.0032	0.0037	0.05	0
Barium, ICAP	mg/L	46	46	0.713	0.0795	0.2258	2	0
Bis(2-ethylhexyl)phthalate	ug/L	46	2	3 J	0.5 J	1.7500	NR	NA
Boron, ICAP	mg/L	46	46	0.273	0.0065	0.0425	NR	NA
Calcium, ICAP	mg/L	46	46	66.1	2.1	42.6857	NR	NA
Cesium-137	pCi/L	46	1	5.55 J	5.55 J	5.5500	120	0
Chromium, ICAP	mg/L	46	7	0.0206	0.0031	0.0077	0.1	0
Cm-243/244	pCi/L	46	2	0.62	0.22 J	0.4200	36000	0
Copper, ICAP	mg/L	46	20	0.0298	0.0029	0.0109	1.3	0
Curium-245	pCi/L	46	16	0.68	0.16 J	0.3144	1.2	0
Curium-246	pCi/L	46	16	0.68	0.16 J	0.3144	1.2	0
Curium-247	pCi/L	46	5	0.46	0.13	0.2920	1.2	0
Curium-248	pCi/L	46	4	0.2	0.11	0.1575	0.32	0
delta-BHC	ug/L	45	4	0.023 J	0.013 J	0.0180		0
Dimethyl phthalate	ug/L	46	1	0.9 J	0.9 J	0.9000		0
Di-n-butyl phthalate	ug/L	46	7	1 J	0.5 J	0.7429	NR	NA
Endosulfan sulfate	ug/L	45	1	0.014 JX	0.014 JX	0.0140		0
Endrin aldehyde	ug/L	45	2	0.02 J	0.012 J	0.0160		0
Europium-152	pCi/L	46	0				800	0
Indeno(1,2,3-cd)pyrene	ug/L	46	2	0.7	0.7	0.7000		0
Iodine-129	pCi/L	46	5	3.81	1.92 J	2.8300	20	0
Iron, ICAP	mg/L	46	45	2.4	0.0172	0.3995	0.3	20
Lead, ICAP	mg/L	46	3	0.0126	0.0022	0.0058	0.015	0
Lithium, ICAP	mg/L	46	42	0.0773	0.0102	0.0252	NR	NA
Magnesium, ICAP	mg/L	46	46	12.3	0.888	7.2952	NR	NA
Manganese, ICAP	mg/L	46	46	0.926	0.0061	0.0568	0.05	13
Methoxychlor	ug/L	45	2	0.042 J	0.013 X	0.0275		0
Molybdenum, ICAP	mg/L	46	2	0.0081	0.0039	0.0060	NR	NA
Nickel, ICAP	mg/L	46	9	0.0149	0.00084	0.0058	0.1	0
Np-237	pCi/L	46	3	0.78	0.1 J	0.3700	1.2	0
Plutonium-236	pCi/L	46	3	0.42	0.09 J	0.2733	4	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Plutonium-242	pCi/L	46	4	0.14	J	0.1	J	0.1200	1.2	0
Potassium, ICAP	mg/L	46	46	4.02		0.747		1.9804	NR	NA
Potassium-40	pCi/L	46	1	68.8	J	68.8	J	68.8000	280	0
Pu-238	pCi/L	46	4	0.21	J	0.14	J	0.1700	1.6	0
Pu-239/240	pCi/L	46	6	0.3		0.12	J	0.1950	1.2	0
Radium-226	pCi/L	46	25	0.57		0.08	J	0.1996	4	0
Radium-228	pCi/L	46	11	1.56		0.47	J	0.8064	4	0
Sodium, ICAP	mg/L	46	46	146		3.81		20.6480	NR	NA
Strontium, ICAP	mg/L	46	46	1.22		0.0385		0.4292	NR	NA
Strontium-90	pCi/L	46	2	1.67	J	0.56	J	1.1150	8	0
Technetium-99	pCi/L	46	2	4.44	J	3.35	J	3.8950	4000	0
Tetrachloroethene	ug/L	46	1	1	J	1	J	1.0000	5	0
Thorium-227	pCi/L	46	6	0.24	J	0.15	J	0.1883	160	0
Thorium-228	pCi/L	46	7	0.62		0.11	J	0.2571	16	0
Thorium-229	pCi/L	46	4	4.42		0.08	J	1.2225	1.6	1
Thorium-230	pCi/L	46	6	0.3		0.23	J	0.2550	12	0
Thorium-232	pCi/L	46	7	0.42		0.12	J	0.2271	2	0
Thorium-234	pCi/L	46	10	1.01		0.09	J	0.2940	400	0
Titanium, ICAP	mg/L	46	21	0.0475		0.0031		0.0165	NR	NA
Toluene	ug/L	46	5	0.3	J	0.1	J	0.1600	1000	0
Trichloroethene	ug/L	46	1	0.2	J	0.2	J	0.2000	5	0
Tritium	pCi/L	46	3	576		315	J	402.0000	20000	0
Uranium, ICAP	mg/L	46	1	0.0054		0.0054		0.0054	0.03	0
Uranium-232	pCi/L	43	3	0.36		0.05		0.2233	4	0
Uranium-233/234	pCi/L	46	21	2.08		0.12	J	0.3538	20	0
Uranium-235/236	pCi/L	46	3	0.2	J	0.14	J	0.1600	20	0
Uranium-238	pCi/L	46	10	1.01		0.09	J	0.2940	24	0
Vanadium, ICAP	mg/L	46	4	0.0198		0.0084		0.0132	NR	NA
Yttrium-90	pCi/L	46	2	1.67	J	0.56	J	1.1150	400	0
Zinc	mg/L	1	0							0
Zinc, ICAP	mg/L	45	18	0.0302		0.005		0.0129	5	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =BC				AREA NAME = Exit Pathway - Traverse A						
Barium, ICAP	mg/L	4	4	0.125		0.0896		0.1075	2	0
Bicarbonate	mg/L	4	4	202		145		182.5000	NR	NA
Boron, ICAP	mg/L	4	4	0.036		0.018		0.0286	NR	NA
Calcium, ICAP	mg/L	4	4	69.7		52.2	N	59.2250	NR	NA
Chloride	mg/L	4	4	13.5		5.7		10.1250	250	0
Chromium, ICAP	mg/L	4	1	0.0139		0.0139		0.0139	0.1	0
Copper, ICAP	mg/L	4	1	0.0081		0.0081		0.0081	1.3	0
Flouride	mg/L	4	4	0.22		0.11		0.1700		0
Gross Alpha Activity	pCi/L	4	4	9.63		7.5		8.6450	15	0
Gross Beta Activity	pCi/L	4	4	23.1		11.6		17.7750	50	0
Iron, ICAP	mg/L	4	3	0.0606	*N	0.0316		0.0454	0.3	0
Lithium, ICAP	mg/L	4	2	0.0255		0.0215		0.0235	NR	NA
Magnesium, ICAP	mg/L	4	4	21.8		16		19.2750	NR	NA
Manganese, ICAP	mg/L	4	2	0.0615		0.0487		0.0551	0.05	1
Nitrate/Nitrite	mg/L	4	4	4.7		2.1		3.3500	10	0
Potassium, ICAP	mg/L	4	4	4.32		1.08	E	2.4825	NR	NA
Sodium, ICAP	mg/L	4	4	6.17		3.08		4.8850	NR	NA
Strontium, ICAP	mg/L	4	4	0.174		0.137		0.1510	NR	NA
Sulfate	mg/L	4	4	21.5		14.5		17.5500	250	0
Technetium-99	pCi/L	4	4	18.9		10.8		13.8000	4000	0
Total Dissolved Solids	mg/L	4	4	300		269		283.0000	500	0
Total Suspended Solids	mg/L	4	4	7		5		5.7500	NR	NA
Uranium-233/234	pCi/L	4	4	5.26		3.5		4.4800	20	0
Uranium-235/236	pCi/L	4	3	0.476		0.322		0.4220	20	0
Uranium-238	pCi/L	4	4	8.23		5.7		6.9300	24	0

TABLE 4.34. (continued)

REGIME =BC AREA NAME = Exit Pathway - Traverse B

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
1,1-Dichloroethene	ug/L	6	3	2 J	1	1.6667	7	0
1,2-Dichloroethene	ug/L	6	4	16	5 J	9.2500	NR	NA
Alkalinity	mg/L	2	2	215	160	187.5000	NR	NA
Aluminum, ICAP	mg/L	6	1	0.0561	0.0561	0.0561	0.2	0
Barium, ICAP	mg/L	6	6	0.153	0.0157	0.1021	2	0
Bicarbonate	mg/L	6	6	261	101	189.1667	NR	NA
Boron, ICAP	mg/L	6	4	0.122	0.0448	0.0767	NR	NA
Calcium, ICAP	mg/L	6	6	105 N	6.66 N	70.2433	NR k	NA
Chloride	mg/L	6	6	37	12.4	27.3667	250	0
Chromium, ICAP	mg/L	6	1	0.0083	0.0083	0.0083	0.1	0
Chromium, PMS	mg/L	2	0				0.1	0
cis-1,2-Dichloroethene	ug/L	6	4	16	5 J	9.2500	70	0
Copper, ICAP	mg/L	6	2	0.0223	0.0083	0.0153	1.3	0
Flouride	mg/L	6	6	0.39	0.157	0.2457		0
Gross Alpha Activity	pCi/L	6	4	22	4.6	15.6250	15	3
Gross Beta Activity	pCi/L	6	6	75.2	14.5	39.1833	50	1
Iron, ICAP	mg/L	6	6	1.6 *N	0.35	0.9417	0.3	6
Lithium, ICAP	mg/L	6	5	0.0299	0.0148	0.0201	NR w	NA
Magnesium, ICAP	mg/L	6	6	30.5	14.2	23.1333	NR k	NA
Manganese, ICAP	mg/L	6	4	0.0247	0.0114	0.0163	0.05	0
Nitrate as Nitrogen	mg/L	2	2	18.2	7.73	12.9650	10	1
Nitrate/Nitrite	mg/L	4	4	24.2	1.2	14.1000	10	3
Potassium, ICAP	mg/L	6	5	14 E	2.78	6.8060	NR	NA
Sodium, ICAP	mg/L	6	6	16	7.18	12.9300	NR k	NA
Strontium, ICAP	mg/L	6	6	0.365	0.0261	0.2304	NR w	NA
Sulfate	mg/L	6	6	27.9	16.3	22.0667	250	0
Technetium-99	pCi/L	4	3	90.1	48	74.7667	4000	0
Total Dissolved Solids	mg/L	6	6	485	225	358.1667	500	0
Total Suspended Solids	mg/L	6	2	8	2	5.0000	NR	NA
Trichloroethene	ug/L	6	6	19	2 J	10.8333	5	5
Turbidity	NTU	2	2	9.13	3.84	6.4850	1	2
Uranium, ICAP	mg/L	2	0				0.03	0
Uranium, PMS	mg/L	6	5	0.066	0.0122	0.0387	0.03	3
Uranium-233/234	pCi/L	4	4	12.6	0.7	7.1700	20	0
Uranium-235/236	pCi/L	4	4	1.46	0.125	0.8045	20	0
Uranium-238	pCi/L	4	3	22.3	4.45	15.7167	24	0

TABLE 4.34. (continued)

REGIME =BC AREA NAME = Exit Pathway - Traverse C

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
1,2-Dichloroethene	ug/L	4	3	3 J	1 J	2.0000	NR	NA
Alkalinity	mg/L	4	4	333	232	283.7500	NR	NA
Barium, ICAP	mg/L	4	4	0.201	0.064	0.1330	2	0
Bicarbonate	mg/L	4	4	333	232	283.7500	NR	NA
Calcium, ICAP	mg/L	4	4	142	71.4	109.1750	NR	NA
Chloride	mg/L	4	4	71.2	7.16	38.6650	250	0
cis-1,2-Dichloroethene	ug/L	4	3	3 J	1 J	2.0000	70	0
Flouride	mg/L	4	3	0.24	0.161	0.2017		0
Gross Alpha Activity	pCi/L	4	0				15	0
Gross Beta Activity	pCi/L	4	3	65	14	32.3333	50	1
Iron, ICAP	mg/L	4	3	0.753	0.102	0.3797	0.3	1
Lithium, ICAP	mg/L	4	2	0.0208	0.0164	0.0186	NR w	NA
Magnesium, ICAP	mg/L	4	4	39	22.4	29.4500	NR	NA
Manganese, ICAP	mg/L	4	3	0.861	0.00893	0.3120	0.05	2
Nitrate as Nitrogen	mg/L	4	4	19	1.95	12.5375	10	3
Potassium, ICAP	mg/L	4	3	2.95	2.48	2.7200	NR	NA
Sodium, ICAP	mg/L	4	4	30.6	2.35	16.7550	NR	NA
Strontium, ICAP	mg/L	4	4	1.17	0.0584	0.4281	NR w	NA
Sulfate	mg/L	4	4	40.2	12.3	29.6500	250	0
Tetrachloroethene	ug/L	4	2	3 J	3 J	3.0000	5	0
Total Dissolved Solids	mg/L	4	4	544	319	452.0000	500	2
Trichloroethene	ug/L	4	4	88	7	38.7500	5	4
Turbidity	NTU	4	4	7.27	0.265	2.2573	1	1
Uranium, ICAP	mg/L	4	0				0.03	0
Uranium, PMS	mg/L	4	3	0.0135	0.000715	0.0058	0.03	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =BC				AREA NAME = Exit Pathway - Traverse W					
Barium, ICAP	mg/L	6	6	0.0874		0.0315	0.0529	2	0
Boron, ICAP	mg/L	6	6	0.0585		0.0368	0.0488	NR	NA
Calcium, ICAP	mg/L	6	6	63.7		45.4 N	54.5167	NR	NA
Gross Beta Activity	pCi/L	6	1	3.72		3.72	3.7200	50	0
Iron, ICAP	mg/L	6	6	1.94		0.208	1.0545	0.3	5
Lithium, ICAP	mg/L	6	4	0.0147		0.0106	0.0126	NR	NA
Magnesium, ICAP	mg/L	6	6	33.7		23.8	30.1333	NR	NA
Manganese, ICAP	mg/L	6	6	0.142		0.0329	0.1119	0.05	5
Nitrate/Nitrite	mg/L	6	2	0.36		0.24	0.3000	10	0
Potassium, ICAP	mg/L	6	6	2.86		1.36	2.1233	NR	NA
Sodium, ICAP	mg/L	6	6	11.8		5.75	8.1767	NR	NA
Strontium, ICAP	mg/L	6	6	1.13		0.33	0.6758	NR	NA
Uranium-233/234	pCi/L	6	3	1.79		0.814	1.1640	20	0
Uranium-235/236	pCi/L	6	1	0.203		0.203	0.2030	20	0
Uranium-238	pCi/L	6	1	0.666		0.666	0.6660	24	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =BC				AREA NAME = Exit Pathway Spring/Surface Water				
1,1-Dichloroethene	ug/L	4	1	1 J	1 J	1.0000	7	0
1,2-Dichloroethene	ug/L	2	2	10	2 J	6.0000	NR	NA
Alkalinity	mg/L	2	2	238	200	219.0000	NR	NA
Aluminum, ICAP	mg/L	4	2	0.258	0.149	0.2035	0.2	1
Barium, ICAP	mg/L	4	4	0.142	0.0565	0.0936	2	0
Bicarbonate	mg/L	2	2	238	200	219.0000	NR	NA
Boron, ICAP	mg/L	4	3	0.137	0.0133	0.0649	NR w	NA
Cadmium, ICAP	mg/L	4	1	0.00014	0.00014	0.0001	0.005	0
Cadmium, PMS	mg/L	2	0				0.005	0
Calcium, ICAP	mg/L	4	4	103	36.9	67.3000	NR	NA
Chloride	mg/L	2	2	31.8	15	23.4000	250	0
cis-1,2-Dichloroethene	ug/L	4	2	10	2 J	6.0000	70	0
Flouride	mg/L	2	2	0.312	0.166	0.2390		0
Gross Alpha Activity	pCi/L	4	3	16	4.77	10.2233	15	1
Gross Beta Activity	pCi/L	4	4	54	3.64	23.7425	50	1
Iron, ICAP	mg/L	4	4	0.221 N	0.0722	0.1571	0.3	0
Lead, ICAP	mg/L	4	0				0.015	0
Lead, PMS	mg/L	2	1	0.00601	0.00601	0.0060	0.015	0
Lithium, ICAP	mg/L	4	1	0.0116	0.0116	0.0116	NR w	NA
Magnesium, ICAP	mg/L	4	4	19.2	14.5	17.4500	NR	NA
Manganese, ICAP	mg/L	4	4	0.0262	0.0091	0.0182	0.05	0
Nitrate as Nitrogen	mg/L	2	2	17.9	6.41	12.1550	10	1
Nitrate/Nitrite	mg/L	2	2	0.71	0.38	0.5450	10	0
Potassium, ICAP	mg/L	4	4	2.85	0.66	1.6598	NR	NA
Sodium, ICAP	mg/L	4	4	17.4	1.88	7.9050	NR	NA
Strontium, ICAP	mg/L	4	4	0.248	0.0471	0.1333	NR w	NA
Sulfate	mg/L	2	2	26	20.6	23.3000	250	0
Total Dissolved Solids	mg/L	2	2	452	284	368.0000	500	0
Trichloroethene	ug/L	4	1	7	7	7.0000	5	1
Turbidity	NTU	2	2	4.52	1.89	3.2050	1	2
Uranium, ICAP	mg/L	2	0				0.03	0
Uranium, PMS	mg/L	4	3	0.0672	0.01	0.0350	0.03	1
Uranium-233/234	pCi/L	1	1	0.743	0.743	0.7430	20	0
Uranium-234	pCi/L	1	1	0.564	0.564	0.5640	20	0
Uranium-238	pCi/L	2	1	0.932	0.932	0.9320	24	0

TABLE 4.34. (continued)

REGIME =BC AREA NAME = Industrial Landfill I

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Alkalinity	mg/L	2	2	228	216	222.0000	NR		NA
Barium, ICAP	mg/L	2	2	0.112	0.0666	0.0893	2		0
Bicarbonate	mg/L	2	2	228	216	222.0000	NR		NA
Calcium, ICAP	mg/L	2	2	89.9	72.7	81.3000	NR		NA
Chloride	mg/L	2	2	39.4	35.8	37.6000	250		0
Flouride	mg/L	2	2	0.391	0.216	0.3035			0
Gross Alpha Activity	pCi/L	2	2	6.6	2.8	4.7000	15		0
Gross Beta Activity	pCi/L	2	2	15	8.7	11.8500	50		0
Iron, ICAP	mg/L	2	2	3.03	1.45	2.2400	0.3		2
Lead, ICAP	mg/L	2	0				0.015		0
Lead, PMS	mg/L	2	1	0.00294	0.00294	0.0029	0.015		0
Lithium, ICAP	mg/L	2	2	0.0193	0.0189	0.0191	NR	w	NA
Magnesium, ICAP	mg/L	2	2	41.5	38	39.7500	NR		NA
Manganese, ICAP	mg/L	2	2	0.00827	0.00557	0.0069	0.05		0
Nitrate as Nitrogen	mg/L	2	2	9.3	9.03	9.1650	10		0
Potassium, ICAP	mg/L	2	2	6.51	3.3	4.9050	NR		NA
Sodium, ICAP	mg/L	2	2	16.3	16.3	16.3000	NR		NA
Strontium, ICAP	mg/L	2	2	1.02	0.694	0.8570	NR	w	NA
Sulfate	mg/L	2	2	120	55.2	87.6000	250		0
Total Dissolved Solids	mg/L	2	2	462	394	428.0000	500		0
Total Suspended Solids	mg/L	2	2	2	2	2.0000	NR		NA
Trichloroethene	ug/L	2	2	46	45	45.5000	5		2
Turbidity	NTU	2	2	24.6	10.8	17.7000	1		2
Uranium, ICAP	mg/L	2	0				0.03		0
Uranium, PMS	mg/L	2	1	0.00164	0.00164	0.0016	0.03		0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
		REGIME =BC				AREA NAME = Oil Landfarm WMA					
1,1,1-Trichloroethane	ug/L	16	1	6		6		6.0000	200		0
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	10	1	37	D	37	D	37.0000	NR		NA
1,1-Dichloroethane	ug/L	16	3	13		7	DJ	10.3333	NR		NA
1,1-Dichloroethene	ug/L	12	7	30	D	1	J	7.0000	7		1
1,2-Dichloroethene	ug/L	10	6	330	D	2	J	58.1667	NR		NA
1,4-Dichlorobenzene	ug/L	14	1	3	J	3	J	3.0000	75		0
Aldrin	ug/L	4	1	0.014	J	0.014	J	0.0140			0
Alkalinity	mg/L	10	10	636		196		335.5000	NR		NA
Aluminum, ICAP	mg/L	16	4	0.729		0.0327		0.2732	0.2		2
Americium-243	pCi/L	4	4	1.22		0.13	J	0.5950	1.2		1
Arsenic, ICAP	mg/L	16	0						0.05		0
Arsenic, PMS	mg/L	10	1	0.0115		0.0115		0.0115	0.05		0
Barium, ICAP	mg/L	16	16	1.76		0.0487		0.3701	2	k	0
Benzene	ug/L	16	2	10	DJ	0.5	J	5.2500	5		1
Bicarbonate	mg/L	10	10	636		196		335.5000	NR		NA
Bis(2-ethylhexyl)phthalate	ug/L	4	2	2	J	0.6	J	1.3000	NR		NA
Boron, ICAP	mg/L	16	11	3.16		0.1		0.4762	NR	w	NA
Calcium, ICAP	mg/L	16	16	691		1.19		125.1350	NR	k	NA
Carbon Tetrachloride	ug/L	16	4	4	J	1	J	2.5000	5		0
Chloride	mg/L	10	10	134		5.57		66.7830	250		0
Chlorobenzene	ug/L	16	2	14		1	J	7.5000	100		0
Chloroform	ug/L	16	3	2	J	2	J	2.0000	100		0
cis-1,2-Dichloroethene	ug/L	16	8	330	D	2	J	49.1250	70		1
Cobalt, ICAP	mg/L	16	2	0.0393		0.0241		0.0317	NR		NA
Copper, ICAP	mg/L	16	2	0.0037		0.0028		0.0033	1.3		0
Curium-245	pCi/L	4	4	1.45		0.23	J	0.7250	1.2		1
Curium-246	pCi/L	4	4	1.45		0.23	J	0.7250	1.2		1
Di-n-butyl phthalate	ug/L	4	3	1	J	0.5	J	0.8333	NR		NA
Flouride	mg/L	10	4	0.482		0.126		0.3783			0
Gross Alpha Activity	pCi/L	12	5	79		4.8		22.2000	15		1
Gross Beta Activity	pCi/L	12	8	330		15		71.8750	50		3
Iron, ICAP	mg/L	16	15	22.9		0.0631		2.6759	0.3		9
Lead, ICAP	mg/L	16	0						0.015		0
Lead, PMS	mg/L	10	8	0.0945		0.00056		0.0150	0.015		1
Lithium, ICAP	mg/L	16	14	0.12		0.0164		0.0392	NR	w	NA
Magnesium, ICAP	mg/L	16	16	55		0.468		23.8826	NR	k	NA

TABLE 4.34. (continued)

NUMBER COMPOUND	UNITS	MAXIMUM NUMBER OF SAMPLES	MINIMUM NUMBER DETECTED	AVERAGE DETECTED RESULT		NUMBER OF DETECTED RESULT		DETECTED RESULT	REF. VALUE		RESULTS > REF.
Manganese, ICAP	mg/L	16	13	6.28		0.0026		1.1378	0.05	k	7
Mercury, CVAA	mg/L	16	1	0.000206		0.000206		0.0002	0.002		0
Nickel, ICAP	mg/L	16	3	0.0512		0.0265		0.0388	0.1	z	0
Nickel, PMS	mg/L	10	4	0.0548		0.00713		0.0324	0.1		0
Nitrate as Nitrogen	mg/L	10	8	462		8.22		90.9025	10		7
Plutonium-242	pCi/L	4	1	0.18	J	0.18	J	0.1800	1.2		0
Potassium, ICAP	mg/L	16	14	12.8		1.16		3.2400	NR		NA
Radium-228	pCi/L	4	1	0.86	J	0.86	J	0.8600	4		0
Selenium, ICAP	mg/L	16	0						0.05		0
Selenium, PMS	mg/L	10	1	0.0106		0.0106		0.0106	0.05		0
Sodium, ICAP	mg/L	16	16	111		2.74		45.8119	NR	k	NA
Strontium, ICAP	mg/L	16	16	2		0.0328		0.7183	NR	kw	NA
Sulfate	mg/L	10	10	76.2		4.65		28.0070	250		0
Technetium-99	pCi/L	4	1	4.43	J	4.43	J	4.4300	4000		0
Tetrachloroethene	ug/L	16	5	73		1	J	23.6000	5		2
Thorium-230	pCi/L	4	0						12		0
Thorium-232	pCi/L	4	1	0.14	J	0.14	J	0.1400	2		0
Thorium-234	pCi/L	4	1	0.14		0.14		0.1400	400		0
Titanium, ICAP	mg/L	14	2	0.0122		0.003		0.0076	NR		NA
Total Dissolved Solids	mg/L	10	10	3010		505		897.7000	500		10
Total Suspended Solids	mg/L	10	5	15		2		5.8000	NR		NA
Trichloroethene	ug/L	16	9	290	D	6		101.1111	5		9
Turbidity	NTU	10	10	198		0.515		25.4895	1		9
Uranium, ICAP	mg/L	14	0						0.03		0
Uranium, PMS	mg/L	12	7	0.172		0.00114		0.0281	0.03		1
Uranium-232	pCi/L	4	1	1.4	J	1.4	J	1.4000	4		0
Uranium-233/234	pCi/L	4	2	0.18		0.18		0.1800	20		0
Uranium-238	pCi/L	4	1	0.14		0.14		0.1400	24		0
Vinyl Chloride	ug/L	16	1	25	D	25	D	25.0000	2		1
Zinc, ICAP	mg/L	16	2	0.0108		0.0058		0.0083	5		0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =BC				AREA NAME = Rust Spoil Area					
1,1-Dichloroethane	ug/L	1	1	1 J	1 J	1.0000	NR		NA
1,2-Dichloroethene	ug/L	1	1	3 J	3 J	3.0000	NR		NA
Alkalinity	mg/L	1	1	371	371	371.0000	NR		NA
Barium, ICAP	mg/L	1	1	0.0754	0.0754	0.0754	2		0
Bicarbonate	mg/L	1	1	371	371	371.0000	NR		NA
Calcium, ICAP	mg/L	1	1	159	159	159.0000	NR		NA
Chloride	mg/L	1	1	26.7	26.7	26.7000	250		0
cis-1,2-Dichloroethene	ug/L	1	1	3 J	3 J	3.0000	70		0
Gross Alpha Activity	pCi/L	1	1	3.2	3.2	3.2000	15		0
Gross Beta Activity	pCi/L	1	1	11	11	11.0000	50		0
Magnesium, ICAP	mg/L	1	1	16.1	16.1	16.1000	NR		NA
Manganese, ICAP	mg/L	1	1	0.0629	0.0629	0.0629	0.05		1
Nitrate as Nitrogen	mg/L	1	1	1.06	1.06	1.0600	10		0
Potassium, ICAP	mg/L	1	1	4.1	4.1	4.1000	NR		NA
Sodium, ICAP	mg/L	1	1	12.3	12.3	12.3000	NR		NA
Strontium, ICAP	mg/L	1	1	0.257	0.257	0.2570	NR	w	NA
Sulfate	mg/L	1	1	87.8	87.8	87.8000	250		0
Total Dissolved Solids	mg/L	1	1	534	534	534.0000	500		1
Trichloroethene	ug/L	1	1	13	13	13.0000	5		1
Turbidity	NTU	1	1	0.491	0.491	0.4910	1		0
Uranium, ICAP	mg/L	1	0				0.03		0
Uranium, PMS	mg/L	1	1	0.00156	0.00156	0.0016	0.03		0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
		REGIME =BC			AREA NAME = S-3 Site				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	10	3	61	6	36.3333	NR		NA
1,1-Dichloroethene	ug/L	12	2	3 J	3 J	3.0000	7		0
1,2-Dichloroethene	ug/L	10	2	1 J	1 J	1.0000	NR		NA
Alkalinity	mg/L	10	10	540	42.1	266.1600	NR		NA
Aluminum, ICAP	mg/L	12	6	73.9	0.425	23.2062	0.2		6
Americium-241	pCi/L	2	1	0.0427	0.0427	0.0427	1.2		0
Barium, ICAP	mg/L	12	12	397	0.0241	34.0446	2		3
Benzene	ug/L	12	1	1 J	1 J	1.0000	5		0
Beryllium, ICAP	mg/L	12	5	0.0389	0.000886	0.0152	0.004		2
Bicarbonate	mg/L	10	10	540	42.1	259.8900	NR		NA
Boron, ICAP	mg/L	12	4	0.889	0.0308	0.3345	NR	w	NA
Cadmium, ICAP	mg/L	12	4	0.418	0.0074	0.2021	0.005	z	4
Cadmium, PMS	mg/L	10	3	0.39	0.0225	0.2388	0.005		3
Calcium, ICAP	mg/L	12	12	9800	2.03	1435.5192	NR		NA
Carbon Disulfide	ug/L	12	1	2 J	2 J	2.0000	NR		NA
Carbonate	mg/L	10	1	62.6	62.6	62.6000	NR		NA
Chloride	mg/L	10	10	320	12.7	131.8200	250		3
Chloroform	ug/L	12	3	37	3 J	23.0000	100		0
Chromium, ICAP	mg/L	12	1	0.17	0.17	0.1700	0.1	z	1
Chromium, PMS	mg/L	10	1	0.168	0.168	0.1680	0.1		1
cis-1,2-Dichloroethene	ug/L	12	2	1 J	1 J	1.0000	70		0
Cobalt, ICAP	mg/L	12	4	0.566	0.024	0.2866	NR		NA
Flouride	mg/L	10	7	30.1	0.137	5.2030			0
Gross Alpha Activity	pCi/L	12	7	670	8.8	154.8000	15		5
Gross Beta Activity	pCi/L	12	8	19000	20	4579.3750	50		6
Iron, ICAP	mg/L	12	7	2.23	0.0141	0.7939	0.3		4
Lead, ICAP	mg/L	12	0				0.015		0
Lead, PMS	mg/L	10	7	0.00878	0.000525	0.0023	0.015		0
Lithium, ICAP	mg/L	12	9	1.17	0.011	0.3584	NR	w	NA
Magnesium, ICAP	mg/L	12	12	2530	0.754	337.3953	NR		NA
Manganese, ICAP	mg/L	12	12	122	0.015	22.5531	0.05		11
Mercury, CVAA	mg/L	12	4	0.000918	0.00024	0.0005	0.002		0
Methylene chloride	ug/L	12	4	16	4 J	10.2500	5		3
Nickel, ICAP	mg/L	12	4	5.25	0.102	2.5293	0.1	z	4
Nickel, PMS	mg/L	10	8	3.9	0.00588	0.9565	0.1		3
Nitrate as Nitrogen	mg/L	10	10	11100	0.237	1855.7137	10		9

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Nitrate/Nitrite	mg/L	2	2	29.6	19.4	24.5000	10		2
Np-237	pCi/L	2	2	6.77	4.6	5.6850	1.2		2
Potassium, ICAP	mg/L	12	11	129	2.45	23.0218	NR		NA
Selenium, ICAP	mg/L	12	0				0.05		0
Selenium, PMS	mg/L	10	1	0.0164	0.0164	0.0164	0.05		0
Sodium, ICAP	mg/L	12	12	2290	6.96	348.4550	NR		NA
Strontium, ICAP	mg/L	12	12	300	0.0925	28.0110	NR	w	NA
Strontium-90	pCi/L	2	2	2.41	1.4	1.9050	8		0
Sulfate	mg/L	10	9	100	15	38.7778	250		0
Technetium-99	pCi/L	6	6	25000	91	8241.0000	4000		2
Tetrachloroethene	ug/L	12	5	120	4	47.4000	5		3
Thallium, ICAP	mg/L	12	0				0.002		0
Thallium, PMS	mg/L	10	1	0.00059	0.00059	0.0006	0.002		0
Total Dissolved Solids	mg/L	10	10	62700	530	10801.7000	500		10
Total Radium Alpha	pCi/L	2	2	1.24	0.177	0.7085	5		0
Total Suspended Solids	mg/L	10	6	12	2	5.0000	NR		NA
Trichloroethene	ug/L	12	2	2 J	1 J	1.5000	5		0
Turbidity	NTU	10	10	14.5	0.118	3.8162	1		6
Uranium, ICAP	mg/L	10	0				0.03		0
Uranium, PMS	mg/L	12	11	1.65	0.00147	0.3245	0.03		6
Uranium-233/234	pCi/L	1	1	49.2	49.2	49.2000	20		1
Uranium-234	pCi/L	5	5	160	7.9	76.4200	20		4
Uranium-235	pCi/L	5	5	9.9	0.52	4.7040	24		0
Uranium-235/236	pCi/L	1	1	3.96	3.96	3.9600	20		0
Uranium-236	pCi/L	4	4	3	0.25	1.8625	20		0
Uranium-238	pCi/L	6	6	420	23	174.6667	24		5
Zinc, ICAP	mg/L	12	3	0.124	0.0163	0.0578	5		0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =BC				AREA NAME = Spoil Area I					
Alkalinity	mg/L	2	2	367	306	336.5000	NR		NA
Barium, ICAP	mg/L	2	2	0.0685	0.0287	0.0486	2		0
Bicarbonate	mg/L	2	2	367	306	336.5000	NR		NA
Calcium, ICAP	mg/L	2	2	132	107	119.5000	NR		NA
Chloride	mg/L	2	2	13.5	2.98	8.2400	250		0
Gross Alpha Activity	pCi/L	2	0				15		0
Gross Beta Activity	pCi/L	2	1	16	16	16.0000	50		0
Lead, ICAP	mg/L	2	0				0.015		0
Lead, PMS	mg/L	2	1	0.000885	0.000885	0.0009	0.015		0
Magnesium, ICAP	mg/L	2	2	25	16.1	20.5500	NR		NA
Manganese, ICAP	mg/L	2	1	0.122	0.122	0.1220	0.05		1
Nitrate as Nitrogen	mg/L	2	2	5.85	1.45	3.6500	10		0
Potassium, ICAP	mg/L	2	1	3.91	3.91	3.9100	NR		NA
Sodium, ICAP	mg/L	2	2	8.6	1.96	5.2800	NR		NA
Strontium, ICAP	mg/L	2	2	0.222	0.0873	0.1547	NR	w	NA
Sulfate	mg/L	2	2	74	8.25	41.1250	250		0
Tetrachloroethene	ug/L	2	2	7	6	6.5000	5		2
Total Dissolved Solids	mg/L	2	2	445	362	403.5000	500		0
Trichloroethene	ug/L	2	2	2 J	2 J	2.0000	5		0
Turbidity	NTU	2	2	0.219	0.143	0.1810	1		0
Uranium, ICAP	mg/L	2	0				0.03		0
Uranium, PMS	mg/L	2	1	0.00258	0.00258	0.0026	0.03		0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =CR				AREA NAME = Chestnut Ridge Borrow Area Waste Pile				
Barium, ICAP	mg/L	4	4	0.0172	0.0143	0.0153	2	0
Bicarbonate	mg/L	4	4	219	168	192.2500	NR	NA
Cadmium, ICAP	mg/L	4	1	0.0002	0.0002	0.0002	0.005	0
Calcium, ICAP	mg/L	4	4	44.8	32.7	37.1750	NR	NA
Chloride	mg/L	4	4	2.6	0.98	1.8200	250	0
Chromium, ICAP	mg/L	4	1	0.0083	0.0083	0.0083	0.1	0
Gross Alpha Activity	pCi/L	4	1	2.18	2.18	2.1800	15	0
Iron, ICAP	mg/L	4	3	4.14	0.0184	2.2495	0.3	2
Magnesium, ICAP	mg/L	4	4	26.7	18.8	22.2750	NR	NA
Manganese, ICAP	mg/L	4	2	0.262	0.0079	0.1350	0.05	1
Nitrate/Nitrite	mg/L	4	3	0.4	0.075	0.2317	10	0
Potassium, ICAP	mg/L	4	4	2.09	0.731	1.1305	NR	NA
Sodium, ICAP	mg/L	4	4	1.48	0.793	0.9805	NR	NA
Strontium, ICAP	mg/L	4	4	0.0242	0.0138	0.0188	NR	NA
Sulfate	mg/L	4	4	6.4	0.58	3.4950	250	0
Zinc, ICAP	mg/L	4	1	0.0144	0.0144	0.0144	5	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =CR				AREA NAME = Chestnut Ridge Security Pits				
1,1,1-Trichloroethane	ug/L	9	5	15	7	10.6000	200	0
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	5	2	6	4 J	5.0000	NR	NA
1,1-Dichloroethane	ug/L	9	5	51	25	35.2000	NR	NA
1,1-Dichloroethene	ug/L	9	5	26	5	15.6000	7	3
Alkalinity	mg/L	5	5	301	229	263.0000	NR	NA
Arsenic, ICAP	mg/L	7	0				0.05	0
Arsenic, PMS	mg/L	5	1	0.0269	0.0269	0.0269	0.05	0
Barium, ICAP	mg/L	7	7	0.0311	0.0155	0.0198	2	0
Bicarbonate	mg/L	5	5	301	229	263.0000	NR	NA
Boron, ICAP	mg/L	7	2	0.149	0.126	0.1375	NR w	NA
Cadmium, ICAP	mg/L	7	1	0.0002	0.0002	0.0002	0.005	0
Cadmium, PMS	mg/L	5	0				0.005	0
Calcium, ICAP	mg/L	7	7	60.6	40	48.8429	NR	NA
Chloride	mg/L	5	5	9.22	1.31	3.1000	250	0
Chromium, ICAP	mg/L	7	2	0.0194	0.0127	0.0161	0.1	0
Chromium, PMS	mg/L	5	0				0.1	0
Copper, ICAP	mg/L	7	1	0.0222	0.0222	0.0222	1.3	0
Gross Alpha Activity	pCi/L	7	2	5.3	2.73	4.0150	15	0
Gross Beta Activity	pCi/L	7	0				50	0
Iron, ICAP	mg/L	7	4	3.43	0.0209	0.8950	0.3	1
Lead, ICAP	mg/L	7	0				0.015	0
Lead, PMS	mg/L	5	2	0.00517	0.00159	0.0034	0.015	0
Magnesium, ICAP	mg/L	7	7	35.7	28.9	31.0429	NR	NA
Manganese, ICAP	mg/L	7	1	0.142	0.142	0.1420	0.05	1
Nickel, ICAP	mg/L	7	2	0.0134	0.0113	0.0124	0.1	0
Nickel, PMS	mg/L	5	0				0.1	0
Nitrate as Nitrogen	mg/L	5	5	0.605	0.133	0.4272	10	0
Potassium, ICAP	mg/L	7	3	4.38	2.55	3.2000	NR	NA
Selenium, ICAP	mg/L	7	0				0.05	0
Selenium, PMS	mg/L	5	1	0.135	0.135	0.1350	0.05	1
Sodium, ICAP	mg/L	7	7	8.18	0.614	1.9200	NR	NA
Strontium, ICAP	mg/L	7	7	0.051	0.0148	0.0255	NR w	NA
Sulfate	mg/L	5	5	3.36	0.73	2.1200	250	0
Tetrachloroethene	ug/L	9	5	18	1 J	5.6000	5	1
Total Dissolved Solids	mg/L	7	7	279	209	251.0000	500	0
Total Suspended Solids	mg/L	7	1	3	3	3.0000	NR	NA

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Trichlorofluoromethane	ug/L	5	3	7	4 J	5.3333	NR	NA
Turbidity	NTU	5	5	32.8	0.122	7.2880	1	3
Zinc, ICAP	mg/L	7	2	0.0607	0.0375	0.0491	5	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =CR				AREA NAME = Chestnut Ridge Sediment Disposal Basin					
Aluminum, ICAP	mg/L	4	1	0.695		0.695	0.6950	0.2	1
Barium, ICAP	mg/L	4	4	0.0347		0.0107	0.0174	2	0
Calcium, ICAP	mg/L	4	4	66.5		27.4	42.4500	NR	NA
Iron, ICAP	mg/L	4	4	0.651		0.0304	0.2092	0.3	1
Magnesium, ICAP	mg/L	4	4	41.9		16.1	26.1750	NR	NA
Manganese, ICAP	mg/L	4	1	0.0194		0.0194	0.0194	0.05	0
Potassium, ICAP	mg/L	4	4	20.5		1.06	6.1750	NR	NA
Sodium, ICAP	mg/L	4	4	5.78		0.529	1.9553	NR	NA
Strontium, ICAP	mg/L	4	4	0.0265	N	0.016	0.0217	NR	NA
Total Dissolved Solids	mg/L	4	4	384		159	233.2500	500	0
Total Suspended Solids	mg/L	4	1	12		12	12.0000	NR	NA
Zinc, ICAP	mg/L	4	2	0.032		0.0134	0.0227	5	0

TABLE 4.34. (continued)

REGIME =CR AREA NAME = Construction/Demolition Landfill VI

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Alkalinity	mg/L	4	4	270	140	207.5000	NR	NA
Alkalinity as HCO3	mg/L	8	8	280	110	203.7500	NR	NA
Barium, ICAP	mg/L	8	6	0.022	0.01	0.0160	2	0
Boron, ICAP	mg/L	8	2	1.1	0.84	0.9700	NR	NA
Bromoform	ug/L	8	1	0.27 J	0.27 J	0.2700	100	0
Calcium, ICAP	mg/L	8	8	97	28	54.7500	NR	NA
Chloride	mg/L	8	2	16	15	15.5000	250	0
Chloroform	ug/L	8	2	3.1	2.6 J	2.8500	100	0
Conductivity	umho/cm	8	8	830	220	453.7500	NR	NA
Gross Beta Activity	pCi/L	8	1	1.54 J	1.54 J	1.5400	50	0
Magnesium, ICAP	mg/L	8	8	53	14	30.1250	NR	NA
Nitrate as Nitrogen	mg/L	8	1	0.53	0.53	0.5300	10	0
pH	Std Unit	8	8	8	7	7.4625	6.5/8.5	0
Potassium, ICAP	mg/L	8	1	2	2	2.0000	NR	NA
Sodium, ICAP	mg/L	8	3	11	2.2	7.6667	NR	NA
Strontium, ICAP	mg/L	8	8	0.051 E	0.018	0.0309	NR	NA
Sulfate	mg/L	8	4	160	6.8	78.6750	250	0
Total Dissolved Solids	mg/L	8	8	540	120	267.5000	500	1
Total Uranium	mg/L	4	0				0.03	0
Turbidity	NTU	8	6	0.87	0.1	0.3300	1	0
Zinc, ICAP	mg/L	4	0				5	0
Zinc, PMS	mg/L	4	2	0.018	0.014	0.0160		0

TABLE 4.34. (continued)

REGIME =CR AREA NAME = Construction/Demolition Landfill VII

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
1,1,1-Trichloroethane	ug/L	8	2	1.5	0.98 J	1.2400	200	0
1,1-Dichloroethane	ug/L	8	2	2	1.6 J	1.8000	NR	NA
1,1-Dichloroethene	ug/L	8	2	2.9	1.6 J	2.2500	7	0
Alkalinity	mg/L	4	4	200	120	155.0000	NR	NA
Alkalinity as HCO3	mg/L	8	8	200	120	156.2500	NR	NA
Aluminum, ICAP	mg/L	8	2	2.6	0.44	1.5200	0.2	2
Barium, ICAP	mg/L	8	6	0.24	0.012	0.0918	2	0
Calcium, ICAP	mg/L	8	8	43	29	37.0000	NR	NA
Chloride	mg/L	8	1	3.2	3.2	3.2000	250	0
cis-1,2-Dichloroethene	ug/L	8	2	4.3 J	4	4.1500	70	0
Conductivity	umho/cm	8	8	370	250	301.2500	NR	NA
Copper, ICAP	mg/L	4	1	0.027	0.027	0.0270	1.3	0
Copper, PMS	mg/L	4	0					0
Gross Alpha Activity	pCi/L	8	1	3.3	3.3	3.3000	15	0
Gross Beta Activity	pCi/L	8	1	1.8 J	1.8 J	1.8000	50	0
Iron, ICAP	mg/L	8	2	1.7	0.56	1.1300	0.3	2
Magnesium, ICAP	mg/L	8	8	25	12	18.0000	NR	NA
Manganese, ICAP	mg/L	8	2	0.032	0.01	0.0210	0.05	0
Nitrate as Nitrogen	mg/L	8	2	0.68	0.65	0.6650	10	0
pH	Std Unit	8	8	7.9	7	7.5750	6.5/8.5	0
Sodium, ICAP	mg/L	8	1	6.4	6.4	6.4000	NR	NA
Strontium, ICAP	mg/L	8	8	0.067	0.016	0.0311	NR	NA
Sulfate	mg/L	8	2	14	10	12.0000	250	0
Tetrachloroethene	ug/L	8	2	5.5	3.4 J	4.4500	5	1
Total Dissolved Solids	mg/L	8	8	200	140	167.5000	500	0
Total Suspended Solids	mg/L	8	2	21	8.8	14.9000	NR	NA
Total Uranium	mg/L	5	1	0.000315 J	0.000315 J	0.0003	0.03	0
Trichloroethene	ug/L	8	2	0.44 J	0.39 J	0.4150	5	0
Trichlorofluoromethane	ug/L	8	2	12	2.6 J	7.3000	NR	NA
Turbidity	NTU	8	6	40	0.13	9.7817	1	3
Zinc, ICAP	mg/L	4	1	0.021	0.021	0.0210	5	0
Zinc, PMS	mg/L	4	3	0.026	0.017	0.0207		0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =CR				AREA NAME = East Chestnut Ridge Waste Pile				
Barium, ICAP	mg/L	8	8	0.204	0.0101	0.0792	2	0
Bicarbonate	mg/L	8	8	272	225	251.6250	NR	NA
Calcium, ICAP	mg/L	8	8	63.6	42.2	50.3000	NR	NA
Chloride	mg/L	8	8	15.2	3.4	10.1875	250	0
Chromium, ICAP	mg/L	8	2	0.0257	0.01	0.0179	0.1	0
Copper, ICAP	mg/L	8	1	0.0055	0.0055	0.0055	1.3	0
Iron, ICAP	mg/L	8	7	7.97	0.0181	1.3412	0.3	3
Magnesium, ICAP	mg/L	8	8	32.3	26.4	30.1875	NR	NA
Manganese, ICAP	mg/L	8	3	0.101	0.0114	0.0693	0.05	2
Nickel, ICAP	mg/L	8	2	0.0747	0.0541	0.0644	0.1	0
Nitrate/Nitrite	mg/L	8	8	1.7	0.028	0.5998	10	0
Potassium, ICAP	mg/L	8	8	2.66	0.632	1.3655	NR	NA
Sodium, ICAP	mg/L	8	8	8.14	1.28	5.2700	NR	NA
Strontium, ICAP	mg/L	8	8	0.0284	0.0157	0.0224	NR	NA
Sulfate	mg/L	8	8	4.5	0.79	2.9238	250	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =CR				AREA NAME = Exit Pathway Spring/Surface Water					
Alkalinity	mg/L	2	2	195	173	184.0000	NR		NA
Aluminum, ICAP	mg/L	6	5	0.289	0.0779	0.1838	0.2		2
Barium, ICAP	mg/L	6	6	0.0898	0.0339	0.0595	2		0
Bicarbonate	mg/L	6	6	195	83.2	156.2000	NR		NA
Boron, ICAP	mg/L	6	4	0.0814	0.0103	0.0422	NR		NA
Calcium, ICAP	mg/L	6	6	52.3	38.3	44.3500	NR		NA
Chloride	mg/L	6	6	2.2	1.63	1.9233	250		0
Flouride	mg/L	6	2	0.14	0.11	0.1250			0
Gross Alpha Activity	pCi/L	6	1	3.4	3.4	3.4000	15		0
Gross Beta Activity	pCi/L	6	0				50		0
Iron, ICAP	mg/L	6	6	0.72	0.102	0.3730	0.3		3
Lead, ICAP	mg/L	6	0				0.015		0
Lead, PMS	mg/L	2	1	0.00062	0.00062	0.0006	0.015		0
Lithium, ICAP	mg/L	6	2	0.0221	0.0153	0.0187	NR		NA
Magnesium, ICAP	mg/L	6	6	20.3	11.9	15.1833	NR		NA
Manganese, ICAP	mg/L	6	6	0.0732	0.00969	0.0358	0.05		2
Nitrate as Nitrogen	mg/L	2	2	0.915	0.194	0.5545	10		0
Nitrate/Nitrite	mg/L	4	4	0.43	0.14	0.2200	10		0
Potassium, ICAP	mg/L	6	4	2.12	0.949	1.5048	NR		NA
Sodium, ICAP	mg/L	6	6	1.67	0.997	1.2995	NR		NA
Strontium, ICAP	mg/L	6	6	0.341	0.0485	0.1322	NR	w	NA
Sulfate	mg/L	6	6	13.8	4.9	8.6233	250		0
Total Dissolved Solids	mg/L	6	6	207	147	179.1667	500		0
Total Suspended Solids	mg/L	6	4	11.6	3	6.1500	NR		NA
Turbidity	NTU	2	2	1.89	1.2	1.5450	1		2
Uranium, ICAP	mg/L	2	0				0.03		0
Uranium, PMS	mg/L	6	2	0.0021	0.00063	0.0014	0.03		0

TABLE 4.34. (continued)

REGIME =CR AREA NAME = Industrial Landfill II

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Alkalinity	mg/L	3	3	240	110	180.0000	NR	NA
Alkalinity as CO3	mg/L	6	2	76	60	68.0000	NR	NA
Alkalinity as HCO3	mg/L	6	6	240	35	153.6667	NR	NA
Barium, ICAP	mg/L	6	6	0.6	0.012	0.2202	2	0
Calcium, ICAP	mg/L	6	6	44	2.3	25.1500	NR	NA
Conductivity	umho/cm	6	6	450	290	365.0000	NR	NA
Copper, ICAP	mg/L	3	1	0.017	0.017	0.0170	1.3	0
Copper, PMS	mg/L	3	0					0
Flouride	mg/L	6	2	1.6	1.5	1.5500		0
Gross Alpha Activity	pCi/L	6	3	2.1 J	1.84 J	1.9467	15	0
Gross Beta Activity	pCi/L	6	4	15	1.6 J	8.6500	50	0
Magnesium, ICAP	mg/L	6	6	30	1.7	19.7500	NR	NA
pH	Std Unit	6	6	10	7.9	8.7667	6.5/8.5	2
Potassium, ICAP	mg/L	6	3	20	3	13.6667	NR	NA
Sodium, ICAP	mg/L	6	5	48	3.2	26.4400	NR	NA
Strontium, ICAP	mg/L	6	6	0.13	0.029	0.0648	NR	NA
Sulfate	mg/L	6	6	17	6.1	10.7000	250	0
Total Dissolved Solids	mg/L	6	6	240	150	193.3333	500	0
Total Uranium	mg/L	3	0				0.03	0
Turbidity	NTU	6	5	0.28	0.15	0.2160	1	0
Uranium, PMS	mg/L	3	1	0.001	0.001	0.0010	0.03	0
Vanadium, ICAP	mg/L	6	2	0.015	0.015	0.0150	NR	NA
Zinc, ICAP	mg/L	3	1	0.064	0.064	0.0640	5	0
Zinc, PMS	mg/L	3	1	0.023	0.023	0.0230		0

TABLE 4.34. (continued)

REGIME =CR AREA NAME = Industrial Landfill IV

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
1,1,1-Trichloroethane	ug/L	12	4	19	14	15.2500	200	0
1,1-Dichloroethane	ug/L	12	4	31	24	26.7500	NR	NA
1,1-Dichloroethene	ug/L	12	4	9.3	4 J	6.4500	7	1
Alkalinity	mg/L	5	5	220	170	192.0000	NR	NA
Alkalinity as HCO3	mg/L	12	12	220	170	184.1667	NR	NA
Aluminum, ICAP	mg/L	12	1	0.15	0.15	0.1500	0.2	0
Barium, ICAP	mg/L	12	8	0.033	0.01	0.0174	2	0
Calcium, ICAP	mg/L	12	12	45	26	35.4167	NR	NA
Carbon Tetrachloride	ug/L	12	1	2.6 J	2.6 J	2.6000	5	0
Chloride	mg/L	12	4	6	3.7	4.6750	250	0
Chromium, ICAP	mg/L	5	0				0.1	0
Chromium, PMS	mg/L	7	1	0.1	0.1	0.1000	0.1	0
Conductivity	umho/cm	12	12	410	300	348.3333	NR	NA
Copper, ICAP	mg/L	5	0				1.3	0
Copper, PMS	mg/L	7	1	0.095	0.095	0.0950		0
Dibromochloromethane	ug/L	12	2	0.19 J	0.18 J	0.1850	100	0
Gross Alpha Activity	pCi/L	12	1	1.5 J	1.5 J	1.5000	15	0
Gross Beta Activity	pCi/L	12	1	2.4 J	2.4 J	2.4000	50	0
Iron, ICAP	mg/L	12	2	0.53	0.14	0.3350	0.3	1
Magnesium, ICAP	mg/L	12	12	27	20	22.1667	NR	NA
Nickel, ICAP	mg/L	5	1	0.22	0.22	0.2200	0.1	1
Nickel, PMS	mg/L	7	4	0.23	0.032	0.1090	0.1	1
pH	Std Unit	12	12	8.3	7.5	7.9667	6.5/8.5	0
Sodium, ICAP	mg/L	12	4	9.8	2.6	5.5500	NR	NA
Strontium, ICAP	mg/L	12	11	0.02	0.011	0.0158	NR	NA
Sulfate	mg/L	12	2	6.6	5.1	5.8500	250	0
Total Dissolved Solids	mg/L	12	12	200	110	171.6667	500	0
Turbidity	NTU	12	8	3.4	0.11	0.9538	1	2
Zinc, ICAP	mg/L	5	1	0.034	0.034	0.0340	5	0
Zinc, PMS	mg/L	7	3	0.058	0.011	0.0277		0

TABLE 4.34. (continued)

REGIME =CR AREA NAME = Industrial Landfill V

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
1,1,1-Trichloroethane	ug/L	12	2	0.5 J	0.31 J	0.4050	200	0
1,1-Dichloroethane	ug/L	12	2	0.32 J	0.31 J	0.3150	NR	NA
1,1-Dichloroethene	ug/L	12	1	0.16 J	0.16 J	0.1600	7	0
Alkalinity	mg/L	6	6	200	99	148.1667	NR	NA
Alkalinity as HCO3	mg/L	12	12	200	99	151.5833	NR	NA
Aluminum, ICAP	mg/L	12	4	1.1	0.13	0.4750	0.2	2
Barium, ICAP	mg/L	12	6	0.13	0.01	0.0422	2	0
Cadmium, PMS	mg/L	12	1	0.0003	0.0003	0.0003	0.005	0
Calcium, ICAP	mg/L	12	12	57	27	37.4167	NR	NA
Chloride	mg/L	12	4	7.5	3.1	5.9500	250	0
Chromium, ICAP	mg/L	6	1	0.032	0.032	0.0320	0.1	0
Chromium, PMS	mg/L	6	1	0.04	0.04	0.0400	0.1	0
Conductivity	umho/cm	12	12	510	230	318.3333	NR	NA
Gross Beta Activity	pCi/L	12	3	2.6 J	1.8 J	2.1533	50	0
Iron, ICAP	mg/L	12	4	1.3	0.11	0.4825	0.3	2
Magnesium, ICAP	mg/L	12	12	32	9.8	19.4000	NR	NA
Manganese, ICAP	mg/L	12	1	0.019	0.019	0.0190	0.05	0
Nitrate as Nitrogen	mg/L	12	6	2.7	0.63	1.4833	10	0
pH	Std Unit	12	12	8.5	7	7.9250	6.5/8.5	0
Potassium, ICAP	mg/L	12	1	2	2	2.0000	NR	NA
Sodium, ICAP	mg/L	12	2	5.5	4.9	5.2000	NR	NA
Strontium, ICAP	mg/L	12	12	0.11	0.013	0.0340	NR	NA
Sulfate	mg/L	12	4	53	22	38.5000	250	0
Total Dissolved Solids	mg/L	12	12	310	120	180.8333	500	0
Total Suspended Solids	mg/L	12	2	21	4	12.5000	NR	NA
Total Uranium	mg/L	11	3	0.00129	0.000359 J	0.0009	0.03	0
Turbidity	NTU	12	11	45	0.1	6.4564	1	5
Zinc, ICAP	mg/L	6	1	0.022	0.022	0.0220	5	0
Zinc, PMS	mg/L	6	1	0.015	0.015	0.0150		0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =CR				AREA NAME = Kerr Hollow Quarry					
Barium, ICAP	mg/L	4	4	0.099		0.0463	0.0710	2	0
Boron, ICAP	mg/L	4	3	0.812		0.0169	0.3546	NR	NA
Calcium, ICAP	mg/L	4	4	54.8		29.8	44.3250	NR	NA
Gross Alpha Activity	pCi/L	4	3	12.5		2.47	6.2300	15	0
Gross Beta Activity	pCi/L	4	3	15.1		4.27	9.7800	50	0
Iron, ICAP	mg/L	4	2	0.68		0.0243	0.3522	0.3	1
Lithium, ICAP	mg/L	4	3	0.315		0.0269	0.1520	NR	NA
Magnesium, ICAP	mg/L	4	4	35.9		18.5	26.4000	NR	NA
Manganese, ICAP	mg/L	4	1	0.0094		0.0094	0.0094	0.05	0
Potassium, ICAP	mg/L	4	4	17.3		1.62	8.1825	NR	NA
Sodium, ICAP	mg/L	4	4	19.3		0.792	6.3380	NR	NA
Strontium, ICAP	mg/L	4	4	6.64	N	0.0497	2.4187	NR	NA
Total Dissolved Solids	mg/L	4	4	300		251	276.5000	500	0
Uranium, PMS	mg/L	4	1	0.012		0.012	0.0120	0.03	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =CR				AREA NAME = South Campus Facility, Bethel Valley				
1,2-Dichloroethene	ug/L	2	2	41	1 J	21.0000	NR	NA
cis-1,2-Dichloroethene	ug/L	2	2	41	1 J	21.0000	70	0
Trichloroethene	ug/L	2	2	21	2 J	11.5000	5	1

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =CR				AREA NAME = United Nuclear Corporation Site				
Aluminum, ICAP	mg/L	8	1	0.0701	0.0701	0.0701	0.2	0
Antimony, ICAP	mg/L	8	1	0.0079	0.0079	0.0079	0.006	1
Barium, ICAP	mg/L	8	6	0.0274	0.0074	0.0156	2	0
Bicarbonate	mg/L	8	8	257	87.1	166.0125	NR	NA
Calcium, ICAP	mg/L	8	8	53.5	1.27	29.0325	NR	NA
Carbonate	mg/L	8	2	131	79.2	105.1000	NR	NA
Chloride	mg/L	8	8	14.6	1.4	5.3125	250	0
Copper, ICAP	mg/L	8	3	0.0168	0.0076	0.0120	1.3	0
Gross Alpha Activity	pCi/L	8	1	3.35	3.35	3.3500	15	0
Gross Beta Activity	pCi/L	8	2	67.1	67.1	67.1000	50	2
Iron, ICAP	mg/L	8	5	0.134	0.0101	0.0447	0.3	0
Lead, ICAP	mg/L	8	1	0.0042	0.0042	0.0042	0.015	0
Lithium, ICAP	mg/L	8	2	0.144	0.135	0.1395	NR	NA
Magnesium, ICAP	mg/L	8	8	31.7	10.9	19.6875	NR	NA
Nitrate/Nitrite	mg/L	8	8	0.58	0.066	0.3983	10	0
Potassium, ICAP	mg/L	8	8	71.5	0.783	17.8931	NR	NA
Potassium-40	pCi/L	2	1	201	201	201.0000	280	0
Sodium, ICAP	mg/L	8	8	10.9	0.445	4.4388	NR	NA
Strontium, ICAP	mg/L	8	6	0.0254	0.0098	0.0158	NR	NA
Sulfate	mg/L	8	8	3.1	1.1	2.2000	250	0
Total Dissolved Solids	mg/L	8	8	309	170	225.6250	500	0
Total Suspended Solids	mg/L	8	1	5.5	5.5	5.5000	NR	NA
Uranium-233/234	pCi/L	8	6	0.79	0.409	0.6213	20	0
Zinc, ICAP	mg/L	8	2	0.0161	0.0138	0.0150	5	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Beta-4 Security Pits				
1,2-Dichloroethene	ug/L	1	1	25	25	25.0000	NR	NA
Alkalinity	mg/L	1	1	262	262	262.0000	NR	NA
Barium, ICAP	mg/L	1	1	0.142	0.142	0.1420	2	0
Bicarbonate	mg/L	1	1	262	262	262.0000	NR	NA
Calcium, ICAP	mg/L	1	1	101	101	101.0000	NR	NA
Chloride	mg/L	1	1	29.1	29.1	29.1000	250	0
cis-1,2-Dichloroethene	ug/L	1	1	25	25	25.0000	70	0
Flouride	mg/L	1	1	0.124	0.124	0.1240		0
Gross Alpha Activity	pCi/L	1	0				15	0
Gross Beta Activity	pCi/L	1	0				50	0
Iron, ICAP	mg/L	1	1	1.91	1.91	1.9100	0.3	1
Lithium, ICAP	mg/L	1	1	0.0168	0.0168	0.0168	NR w	NA
Magnesium, ICAP	mg/L	1	1	9.39	9.39	9.3900	NR	NA
Manganese, ICAP	mg/L	1	1	2.06	2.06	2.0600	0.05	1
Nickel, ICAP	mg/L	1	0				0.1	0
Nickel, PMS	mg/L	1	1	0.00732	0.00732	0.0073	0.1	0
Sodium, ICAP	mg/L	1	1	9.01	9.01	9.0100	NR	NA
Strontium, ICAP	mg/L	1	1	0.165	0.165	0.1650	NR w	NA
Sulfate	mg/L	1	1	5.07	5.07	5.0700	250	0
Tetrachloroethene	ug/L	1	1	2 J	2 J	2.0000	5	0
Total Dissolved Solids	mg/L	1	1	340	340	340.0000	500	0
Total Suspended Solids	mg/L	1	1	3	3	3.0000	NR	NA
Trichloroethene	ug/L	1	1	4 J	4 J	4.0000	5	0
Turbidity	NTU	1	1	8.33	8.33	8.3300	1	1

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Building 8110				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	3	3	29	2 J	17.6667	NR	NA
1,2-Dichloroethene	ug/L	3	3	47	33	39.0000	NR	NA
Alkalinity	mg/L	3	3	258	243	252.3333	NR	NA
Barium, ICAP	mg/L	3	3	0.276	0.0412	0.1851	2	0
Bicarbonate	mg/L	3	3	258	243	252.3333	NR	NA
Calcium, ICAP	mg/L	3	3	255	115	203.0000	NR	NA
Carbon Tetrachloride	ug/L	3	2	9	7	8.0000	5	2
Chloride	mg/L	3	3	24.3	11.5	18.9000	250	0
Chloroform	ug/L	3	2	25	20	22.5000	100	0
cis-1,2-Dichloroethene	ug/L	3	3	47	33	39.0000	70	0
Gross Alpha Activity	pCi/L	3	1	40	40	40.0000	15	1
Gross Beta Activity	pCi/L	3	1	21	21	21.0000	50	0
Iron, ICAP	mg/L	3	2	0.153	0.118	0.1355	0.3	0
Magnesium, ICAP	mg/L	3	3	79.1	9.2	53.9333	NR	NA
Manganese, ICAP	mg/L	3	3	0.237	0.192	0.2117	0.05	3
Mercury, CVAA	mg/L	3	2	0.000284	0.000271	0.0003	0.002	0
Nickel, ICAP	mg/L	3	0				0.1	0
Nickel, PMS	mg/L	3	1	0.0144	0.0144	0.0144	0.1	0
Nitrate as Nitrogen	mg/L	3	3	210	0.215	124.4050	10	2
Potassium, ICAP	mg/L	3	2	4.13	3.63	3.8800	NR	NA
Sodium, ICAP	mg/L	3	3	30.2	12.7	23.3000	NR	NA
Strontium, ICAP	mg/L	3	3	0.844	0.159	0.5803	NR w	NA
Sulfate	mg/L	3	3	83.6	46.5	60.4667	250	0
Tetrachloroethene	ug/L	3	3	160	62	124.0000	5	3
Total Dissolved Solids	mg/L	3	3	1340	394	1004.6667	500	2
Total Suspended Solids	mg/L	3	2	3	2	2.5000	NR	NA
Trichloroethene	ug/L	3	3	610 D	13	374.3333	5	3
Turbidity	NTU	3	3	3.64	0.433	1.8543	1	2
Uranium, ICAP	mg/L	3	0				0.03	0
Uranium, PMS	mg/L	3	3	0.0011	0.00066	0.0010	0.03	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Building 9201-2				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	2	2	61	52	56.5000	NR	NA
1,1-Dichloroethene	ug/L	2	2	5 J	5 J	5.0000	7	0
1,2-Dichloroethene	ug/L	2	2	1200 D	920 D	1060.0000	NR	NA
1,4-Dichlorobenzene	ug/L	2	1	3 J	3 J	3.0000	75	0
Alkalinity	mg/L	2	2	187	172	179.5000	NR	NA
Barium, ICAP	mg/L	2	2	0.204	0.198	0.2010	2	0
Bicarbonate	mg/L	2	2	187	172	179.5000	NR	NA
Calcium, ICAP	mg/L	2	2	68.2	67.6	67.9000	NR k	NA
Chloride	mg/L	2	2	33.5	32.5	33.0000	250	0
Chlorobenzene	ug/L	2	2	1 J	1 J	1.0000	100	0
cis-1,2-Dichloroethene	ug/L	2	2	1200 D	910 D	1055.0000	70	2
Dichlorodifluoromethane	ug/L	2	1	2 J	2 J	2.0000	NR	NA
Flouride	mg/L	2	2	0.217	0.206	0.2115		0
Gross Alpha Activity	pCi/L	2	0				15	0
Gross Beta Activity	pCi/L	2	0				50	0
Iron, ICAP	mg/L	2	2	0.603	0.176	0.3895	0.3	1
Lead, ICAP	mg/L	2	0				0.015	0
Lead, PMS	mg/L	2	1	0.00398	0.00398	0.0040	0.015	0
Magnesium, ICAP	mg/L	2	2	12.3	11.1	11.7000	NR k	NA
Manganese, ICAP	mg/L	2	2	0.609	0.591	0.6000	0.05	2
Potassium, ICAP	mg/L	2	2	2.51	2.46	2.4850	NR	NA
Sodium, ICAP	mg/L	2	2	21.9	21.8	21.8500	NR k	NA
Strontium, ICAP	mg/L	2	2	0.293	0.268	0.2805	NR w	NA
Sulfate	mg/L	2	2	39.3	39	39.1500	250	0
Tetrachloroethene	ug/L	2	2	3400 D	2000 D	2700.0000	5	2
Total Dissolved Solids	mg/L	2	2	313	293	303.0000	500	0
trans-1,2-Dichloroethene	ug/L	2	2	6	6	6.0000	100	0
Trichloroethene	ug/L	2	2	800 D	460 D	630.0000	5	2
Turbidity	NTU	2	2	4.46	0.529	2.4945	1	1
Vinyl Chloride	ug/L	2	2	81	71	76.0000	2	2

TABLE 4.34. (continued)

REGIME =EF AREA NAME = Coal Pile Trench

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
1,2-Dichloroethene	ug/L	5	5	33	7	19.2000	NR	NA
Alkalinity	mg/L	5	5	326	164	278.6000	NR	NA
Aluminum, ICAP	mg/L	5	1	0.223	0.223	0.2230	0.2	1
Barium, ICAP	mg/L	5	5	0.0929	0.0172	0.0532	2	0
Beryllium, ICAP	mg/L	5	2	0.00548	0.000746	0.0031	0.004	1
Bicarbonate	mg/L	5	5	326	164	278.6000	NR	NA
Boron, ICAP	mg/L	5	1	0.127	0.127	0.1270	NR w	NA
Calcium, ICAP	mg/L	5	5	522	81.3	241.2600	NR	NA
Chloride	mg/L	5	5	62.2	13	27.0000	250	0
Chloroform	ug/L	5	1	2 J	2 J	2.0000	100	0
cis-1,2-Dichloroethene	ug/L	5	5	33	7	19.2000	70	0
Cobalt, ICAP	mg/L	5	1	0.0531	0.0531	0.0531	NR	NA
Copper, ICAP	mg/L	5	1	0.0306	0.0306	0.0306	1.3	0
Flouride	mg/L	5	1	1.01	1.01	1.0100		0
Gross Alpha Activity	pCi/L	5	0				15	0
Gross Beta Activity	pCi/L	5	1	12	12	12.0000	50	0
Iron, ICAP	mg/L	5	4	2.98	0.0922	1.0966	0.3	3
Lead, ICAP	mg/L	5	0				0.015	0
Lead, PMS	mg/L	5	1	0.00264	0.00264	0.0026	0.015	0
Lithium, ICAP	mg/L	5	3	0.0427	0.0114	0.0234	NR w	NA
Magnesium, ICAP	mg/L	5	5	75.1	17	35.1200	NR	NA
Manganese, ICAP	mg/L	5	5	14	0.00756	3.4837	0.05	4
Mercury, CVAA	mg/L	5	1	0.000521	0.000521	0.0005	0.002	0
Nickel, ICAP	mg/L	5	1	0.0623	0.0623	0.0623	0.1 z	0
Nickel, PMS	mg/L	5	3	0.0376	0.00522	0.0181	0.1	0
Nitrate as Nitrogen	mg/L	5	5	4.03	0.0474	1.2591	10	0
Potassium, ICAP	mg/L	5	5	9.93	2.4	4.9240	NR	NA
Sodium, ICAP	mg/L	5	5	16.3	7.72	13.4840	NR	NA
Strontium, ICAP	mg/L	5	5	0.738	0.222	0.4256	NR w	NA
Sulfate	mg/L	5	5	1150	114	410.4000	250	2
Tetrachloroethene	ug/L	5	3	2600 D	1 J	882.0000	5	2
Total Dissolved Solids	mg/L	5	5	2230	358	1006.2000	500	4
Total Suspended Solids	mg/L	5	2	4	2	3.0000	NR	NA
Trichloroethene	ug/L	5	3	18	3 J	8.3333	5	1
Turbidity	NTU	5	5	6.61	0.223	3.1820	1	3

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Uranium, ICAP	mg/L	5	0				0.03	0
Uranium, PMS	mg/L	5	3	0.00131	0.000965	0.0011	0.03	0
Vanadium, ICAP	mg/L	5	1	0.0265	0.0265	0.0265	NR	NA
Vinyl Chloride	ug/L	5	1	2	2	2.0000	2	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Exit Pathway - Traverse E				
1,2-Dichloroethene	ug/L	1	1	9	9	9.0000	NR	NA
Barium, ICAP	mg/L	1	1	0.0422	0.0422	0.0422	2	0
Bicarbonate	mg/L	1	1	287	287	287.0000	NR	NA
Boron, ICAP	mg/L	1	1	0.113	0.113	0.1130	NR	NA
Cadmium, ICAP	mg/L	1	1	0.0042	0.0042	0.0042	0.005	0
Calcium, ICAP	mg/L	1	1	95.5	95.5	95.5000	NR	NA
Chloride	mg/L	1	1	9	9	9.0000	250	0
cis-1,2-Dichloroethene	ug/L	1	1	9	9	9.0000	70	0
Flouride	mg/L	1	1	0.25	0.25	0.2500		0
Gross Beta Activity	pCi/L	1	1	5.47	5.47	5.4700	50	0
Iron, ICAP	mg/L	1	1	0.314	0.314	0.3140	0.3	1
Magnesium, ICAP	mg/L	1	1	8.87	8.87	8.8700	NR	NA
Manganese, ICAP	mg/L	1	1	0.239	0.239	0.2390	0.05	1
Methane	ug/L	1	1	25	25	25.0000	NR	NA
Nitrate/Nitrite	mg/L	1	1	0.34	0.34	0.3400	10	0
Potassium, ICAP	mg/L	1	1	4.29	4.29	4.2900	NR	NA
Sodium, ICAP	mg/L	1	1	13.4	13.4	13.4000	NR	NA
Strontium, ICAP	mg/L	1	1	0.208	0.208	0.2080	NR	NA
Sulfate	mg/L	1	1	19	19	19.0000	250	0
Tetrachloroethene	ug/L	1	1	6	6	6.0000	5	1
Total Dissolved Solids	mg/L	1	1	327	327	327.0000	500	0
Trichloroethene	ug/L	1	1	5	5	5.0000	5	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Exit Pathway - Traverse I				
Barium, ICAP	mg/L	4	4	0.192	0.0414	0.1151	2	0
Bicarbonate	mg/L	4	4	319	277	302.0000	NR	NA
Boron, ICAP	mg/L	4	4	0.0945	0.0194	0.0537	NR	NA
Cadmium, ICAP	mg/L	4	1	0.00015	0.00015	0.0002	0.005	0
Calcium, ICAP	mg/L	4	4	95.1	76.9	85.8250	NR	NA
Carbon Tetrachloride	ug/L	4	4	110 D	39	62.7500	5	4
Chloride	mg/L	4	4	31	20.3	24.7000	250	0
Chloroform	ug/L	4	4	94	13	49.7500	100	0
cis-1,2-Dichloroethene	ug/L	4	2	180 D	97	138.5000	70	2
Flouride	mg/L	4	4	0.21	0.11	0.1650		0
Gross Alpha Activity	pCi/L	4	4	49.4	9.62	29.2800	15	2
Gross Beta Activity	pCi/L	4	4	21.3	5.47	11.4175	50	0
Iron, ICAP	mg/L	4	2	0.0486	0.0246	0.0366	0.3	0
Lithium, ICAP	mg/L	4	1	0.0114	0.0114	0.0114	NR	NA
Magnesium, ICAP	mg/L	4	4	43.6	19.8	30.9500	NR	NA
Manganese, ICAP	mg/L	4	4	0.183	0.0114	0.0971	0.05	2
Nickel, ICAP	mg/L	4	2	0.0143	0.0106	0.0125	0.1	0
Nitrate/Nitrite	mg/L	4	4	9.2	0.056	4.2290	10	0
Potassium, ICAP	mg/L	4	4	3.54	2.1	2.9425	NR	NA
Sodium, ICAP	mg/L	4	4	18.4	5.86	11.0025	NR	NA
Strontium, ICAP	mg/L	4	4	0.54	0.159	0.3513	NR	NA
Sulfate	mg/L	4	4	58.1	27	43.5000	250	0
Tetrachloroethene	ug/L	4	4	110 D	5 J	47.7500	5	2
Trichloroethene	ug/L	4	2	120 D	72	96.0000	5	2
Uranium, PMS	mg/L	4	4	0.15	0.0052	0.0676	0.03	2
Vinyl Chloride	ug/L	4	1	2	2	2.0000	2	0
Zinc, ICAP	mg/L	4	2	0.0104	0.0101	0.0103	5	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
		REGIME =EF		AREA NAME = Exit Pathway - Traverse J				
2-Hexanone	ug/L	24	1	1 J	1 J	1.0000	NR	NA
4-Methyl-2-pentanone	ug/L	24	1	2 J	2 J	2.0000	NR	NA
Alkalinity	mg/L	12	12	310	141	230.7500	NR	NA
Aluminum, ICAP	mg/L	12	1	0.274	0.274	0.2740	0.2	1
Barium, ICAP	mg/L	12	12	0.729	0.0353	0.1636	2	0
Benzene	ug/L	24	1	1 J	1 J	1.0000	5	0
Bicarbonate	mg/L	12	12	310	141	230.7500	NR	NA
Boron, ICAP	mg/L	12	7	0.703	0.102	0.2486	NR w	NA
Calcium, ICAP	mg/L	12	12	126	17.8	62.2167	NR	NA
Carbon Tetrachloride	ug/L	24	14	71	4 J	30.5000	5	12
Chloride	mg/L	12	12	90.9	2.45	21.7067	250	0
Chloroform	ug/L	24	14	13	1 J	5.7143	100	0
Ethanol	ug/L	12	1	150 J	150 J	150.0000		0
Ethyl Benzene	ug/L	24	1	4 J	4 J	4.0000	700	0
Flouride	mg/L	12	8	1.12	0.165	0.5985		0
Gross Alpha Activity	pCi/L	14	4	14	6.3	8.7000	15	0
Gross Beta Activity	pCi/L	14	7	14	4.32	8.7029	50	0
Iron, ICAP	mg/L	12	10	0.504	0.0623	0.1678	0.3	1
Lead, ICAP	mg/L	12	0				0.015	0
Lead, PMS	mg/L	12	5	0.00199	0.00059	0.0011	0.015	0
Lithium, ICAP	mg/L	12	7	0.121	0.013	0.0429	NR w	NA
Magnesium, ICAP	mg/L	12	12	28.4	9.79	19.4742	NR	NA
Manganese, ICAP	mg/L	12	5	0.17	0.00662	0.0653	0.05	3
Nitrate as Nitrogen	mg/L	12	7	0.928	0.0836	0.4478	10	0
Potassium, ICAP	mg/L	12	9	4.85	2.03	3.0422	NR	NA
Sodium, ICAP	mg/L	12	12	162	0.841	31.1726	NR	NA
Strontium, ICAP	mg/L	12	12	3.73	0.0715	1.0440	NR w	NA
Styrene	ug/L	24	1	3 J	3 J	3.0000	100	0
Sulfate	mg/L	12	12	55	0.7	21.5583	250	0
Tetrachloroethene	ug/L	24	12	12	3 J	6.1667	5	6
Toluene	ug/L	24	1	4 J	4 J	4.0000	1000	0
Total Dissolved Solids	mg/L	12	12	513	170	317.0000	500	1
Total Suspended Solids	mg/L	12	3	2	1	1.3333	NR	NA
Trichloroethene	ug/L	24	12	2 J	1 J	1.4167	5	0
Turbidity	NTU	12	12	6.24	0.381	1.5693	1	6
Uranium, ICAP	mg/L	12	0				0.03	0
Uranium, PMS	mg/L	12	2	0.00061	0.00052	0.0006	0.03	0
Zinc, ICAP	mg/L	12	4	0.239	0.0767	0.1534	5	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Exit Pathway Scarboro Road/Pine Ridge					
Alkalinity	mg/L	1	1	177	177	177.0000	NR		NA
Barium, ICAP	mg/L	1	1	0.0841	0.0841	0.0841	2		0
Bicarbonate	mg/L	1	1	177	177	177.0000	NR		NA
Calcium, ICAP	mg/L	1	1	54.7	54.7	54.7000	NR		NA
Chloride	mg/L	1	1	24.7	24.7	24.7000	250		0
Flouride	mg/L	1	1	0.141	0.141	0.1410			0
Gross Alpha Activity	pCi/L	1	1	2.8	2.8	2.8000	15		0
Gross Beta Activity	pCi/L	1	0				50		0
Iron, ICAP	mg/L	1	1	18	18	18.0000	0.3		1
Magnesium, ICAP	mg/L	1	1	17.5	17.5	17.5000	NR		NA
Manganese, ICAP	mg/L	1	1	2.52	2.52	2.5200	0.05		1
Potassium, ICAP	mg/L	1	1	4.27	4.27	4.2700	NR		NA
Sodium, ICAP	mg/L	1	1	7.32	7.32	7.3200	NR		NA
Strontium, ICAP	mg/L	1	1	0.08	0.08	0.0800	NR	w	NA
Sulfate	mg/L	1	1	13.8	13.8	13.8000	250		0
Total Dissolved Solids	mg/L	1	1	242	242	242.0000	500		0
Total Suspended Solids	mg/L	1	1	23	23	23.0000	NR		NA
Turbidity	NTU	1	1	23.3	23.3	23.3000	1		1

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Exit Pathway Spring/Surface Water				
Total Dissolved Solids	mg/L	1	1	223	223	223.0000	500	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Fire Training Facility					
Alkalinity	mg/L	1	1	32.7	32.7	32.7000	NR		NA
Aluminum, ICAP	mg/L	1	1	0.247	0.247	0.2470	0.2		1
Barium, ICAP	mg/L	1	1	0.00971	0.00971	0.0097	2		0
Bicarbonate	mg/L	1	1	32.7	32.7	32.7000	NR		NA
Calcium, ICAP	mg/L	1	1	2.3	2.3	2.3000	NR		NA
Chloride	mg/L	1	1	2.03	2.03	2.0300	250		0
Flouride	mg/L	1	1	0.131	0.131	0.1310			0
Gross Alpha Activity	pCi/L	1	0				15		0
Gross Beta Activity	pCi/L	1	1	21	21	21.0000	50		0
Lithium, ICAP	mg/L	1	1	0.0268	0.0268	0.0268	NR	w	NA
Nitrate as Nitrogen	mg/L	1	1	1.34	1.34	1.3400	10		0
Potassium, ICAP	mg/L	1	1	25.1	25.1	25.1000	NR		NA
Sodium, ICAP	mg/L	1	1	2.99	2.99	2.9900	NR		NA
Strontium, ICAP	mg/L	1	1	0.155	0.155	0.1550	NR	w	NA
Sulfate	mg/L	1	1	5.79	5.79	5.7900	250		0
Total Dissolved Solids	mg/L	1	1	79	79	79.0000	500		0
Turbidity	NTU	1	1	0.466	0.466	0.4660	1		0

TABLE 4.34. (continued)

REGIME =EF AREA NAME = New Hope Pond

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
1,1-Dichloroethene	ug/L	19	4	3	J	1		2.2500	7		0
1,2-Dichloroethene	ug/L	19	11	230	D	1	J	74.7273	NR		NA
Alkalinity	mg/L	7	7	281		175		222.4286	NR		NA
Aluminum, ICAP	mg/L	19	5	0.689		0.202		0.4418	0.2		5
Barium, ICAP	mg/L	19	19	0.636		0.0305		0.2167	2		0
Bicarbonate	mg/L	17	17	281		130		207.1176	NR		NA
Boron, ICAP	mg/L	19	12	0.121		0.0197		0.0529	NR		NA
Cadmium, ICAP	mg/L	19	1	0.00015		0.00015		0.0002	0.005		0
Cadmium, PMS	mg/L	7	0						0.005		0
Calcium, ICAP	mg/L	19	19	141		37.3		76.2105	NR		NA
Carbon Disulfide	ug/L	19	1	2		2		2.0000	NR		NA
Carbon Tetrachloride	ug/L	19	11	1100	D	3		427.0909	5		8
Chloride	mg/L	17	17	65.1		10.9		26.5882	250		0
Chloroform	ug/L	19	9	140	D	1	J	54.5556	100		1
Chromium, ICAP	mg/L	19	3	2.19		0.0761		0.7829	0.1	z	1
Chromium, PMS	mg/L	7	1	0.0531		0.0531		0.0531	0.1		0
cis-1,2-Dichloroethene	ug/L	19	11	230	D	1	J	75.0909	70		4
Cobalt, ICAP	mg/L	19	1	0.0217		0.0217		0.0217	NR		NA
Copper, ICAP	mg/L	19	7	0.0227		0.0054		0.0111	1.3		0
Flouride	mg/L	17	12	0.56		0.12		0.2587			0
Gross Alpha Activity	pCi/L	19	11	335		2.44		60.1418	15		2
Gross Beta Activity	pCi/L	19	10	89.3		4.87		19.7090	50		1
Iron, ICAP	mg/L	19	16	10.3		0.0202		1.6483	0.3		9
Lead, ICAP	mg/L	19	0						0.015		0
Lead, PMS	mg/L	7	4	0.0114		0.0007		0.0053	0.015		0
Lithium, ICAP	mg/L	19	4	0.0154		0.0111		0.0141	NR	w	NA
Magnesium, ICAP	mg/L	19	19	27.5		10.7		19.0158	NR		NA
Manganese, ICAP	mg/L	19	13	1.05		0.0189		0.2940	0.05		8
Methane	ug/L	12	5	170		1.5	J	56.4000	NR		NA
Nickel, ICAP	mg/L	19	2	0.287		0.219		0.2530	0.1		2
Nickel, PMS	mg/L	7	1	0.00629		0.00629		0.0063	0.1		0
Nitrate as Nitrogen	mg/L	7	4	1.57		0.587		0.9705	10		0
Nitrate/Nitrite	mg/L	10	8	1.8		0.091		0.9764	10		0
Potassium, ICAP	mg/L	19	18	7.35		1.17		2.8700	NR		NA
Sodium, ICAP	mg/L	19	19	18.9		5.21		10.7784	NR		NA
Strontium, ICAP	mg/L	19	19	0.541		0.0472		0.2919	NR	w	NA
Sulfate	mg/L	17	17	37.3		2.94		20.4729	250		0
Tetrachloroethene	ug/L	19	13	660	D	2	J	244.9231	5		11

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Total Dissolved Solids	mg/L	19	19	541	191	332.9474	500	1
Total Suspended Solids	mg/L	19	10	51	1	12.7000	NR	NA
trans-1,2-Dichloroethene	ug/L	19	2	2 J	1 J	1.5000	100	0
Trichloroethene	ug/L	19	10	180	0.3 J	78.7300	5	8
Turbidity	NTU	7	7	140	1.36	22.6014	1	7
Uranium, ICAP	mg/L	7	0				0.03	0
Uranium, PMS	mg/L	19	7	0.44	0.00164	0.1188	0.03	4
Uranium-233/234	pCi/L	8	8	311	0.598	77.2860	20	2
Uranium-235/236	pCi/L	8	4	19.9	0.833	9.9175	20	0
Uranium-238	pCi/L	8	7	153	0.312	39.3889	24	2
Vanadium, ICAP	mg/L	19	1	0.0148	0.0148	0.0148	NR	NA
Vinyl Chloride	ug/L	19	5	5	0.8 J	3.1600	2	3
Zinc, ICAP	mg/L	19	6	0.0316	0.0129	0.0197	5	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Rust Garage Area					
Alkalinity	mg/L	1	1	99.4	99.4	99.4000	NR		NA
Aluminum, ICAP	mg/L	1	1	0.347	0.347	0.3470	0.2		1
Barium, ICAP	mg/L	1	1	0.0945	0.0945	0.0945	2		0
Bicarbonate	mg/L	1	1	99.4	99.4	99.4000	NR		NA
Calcium, ICAP	mg/L	1	1	50.7	50.7	50.7000	NR		NA
Chloride	mg/L	1	1	13.6	13.6	13.6000	250		0
Chromium, ICAP	mg/L	1	1	0.242	0.242	0.2420	0.1	z	1
Chromium, PMS	mg/L	1	1	0.205	0.205	0.2050	0.1		1
Flouride	mg/L	1	1	0.415	0.415	0.4150			0
Gross Alpha Activity	pCi/L	1	1	15	15	15.0000	15		0
Gross Beta Activity	pCi/L	1	0				50		0
Iron, ICAP	mg/L	1	1	0.783	0.783	0.7830	0.3		1
Magnesium, ICAP	mg/L	1	1	8.56	8.56	8.5600	NR		NA
Manganese, ICAP	mg/L	1	1	0.138	0.138	0.1380	0.05		1
Nickel, ICAP	mg/L	1	0				0.1		0
Nickel, PMS	mg/L	1	1	0.027	0.027	0.0270	0.1		0
Nitrate as Nitrogen	mg/L	1	1	0.535	0.535	0.5350	10		0
Sodium, ICAP	mg/L	1	1	4.32	4.32	4.3200	NR		NA
Strontium, ICAP	mg/L	1	1	0.112	0.112	0.1120	NR	w	NA
Sulfate	mg/L	1	1	27.3	27.3	27.3000	250		0
Total Dissolved Solids	mg/L	1	1	188	188	188.0000	500		0
Total Suspended Solids	mg/L	1	1	5	5	5.0000	NR		NA
Turbidity	NTU	1	1	5.9	5.9	5.9000	1		1
Uranium, ICAP	mg/L	1	0				0.03		0
Uranium, PMS	mg/L	1	1	0.0124	0.0124	0.0124	0.03		0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = S-2 Site				
1,2-Dichloroethene	ug/L	2	2	240 D	4 J	122.0000	NR	NA
Alkalinity	mg/L	1	1	202	202	202.0000	NR	NA
Aluminum, ICAP	mg/L	2	1	3.49	3.49	3.4900	0.2	1
Arsenic, ICAP	mg/L	2	1	0.0051	0.0051	0.0051	0.05	0
Arsenic, PMS	mg/L	1	0				0.05	0
Barium, ICAP	mg/L	2	2	0.228	0.0843	0.1562	2	0
Beryllium, ICAP	mg/L	2	1	0.0106	0.0106	0.0106	0.004	1
Bicarbonate	mg/L	2	2	202	56.6	129.3000	NR	NA
Boron, ICAP	mg/L	2	1	0.34	0.34	0.3400	NR	NA
Cadmium, ICAP	mg/L	2	2	2.94	0.0709	1.5055	0.005 z	2
Cadmium, PMS	mg/L	1	1	0.0705	0.0705	0.0705	0.005	1
Calcium, ICAP	mg/L	2	2	453	109	281.0000	NR	NA
Chloride	mg/L	2	2	112	5.68	58.8400	250	0
Chloroform	ug/L	2	2	31 D	8	19.5000	100	0
cis-1,2-Dichloroethene	ug/L	2	2	240 D	4 J	122.0000	70	1
Cobalt, ICAP	mg/L	2	1	0.229	0.229	0.2290	NR	NA
Copper, ICAP	mg/L	2	2	55.8	0.129	27.9645	1.3	1
Flouride	mg/L	2	2	4.2	1.32	2.7600		0
Gross Alpha Activity	pCi/L	2	1	30.3	30.3	30.3000	15	1
Gross Beta Activity	pCi/L	2	1	23.5	23.5	23.5000	50	0
Iron, ICAP	mg/L	2	1	0.197	0.197	0.1970	0.3	0
Lead, ICAP	mg/L	2	1	0.0219	0.0219	0.0219	0.015	1
Lead, PMS	mg/L	1	0				0.015	0
Lithium, ICAP	mg/L	2	1	0.0682	0.0682	0.0682	NR	NA
Magnesium, ICAP	mg/L	2	2	111	15.8	63.4000	NR	NA
Manganese, ICAP	mg/L	2	2	41.5	2.05	21.7750	0.05	2
Methane	ug/L	1	1	8.9	8.9	8.9000	NR	NA
Nickel, ICAP	mg/L	2	1	1.79	1.79	1.7900	0.1	1
Nickel, PMS	mg/L	1	1	0.0177	0.0177	0.0177	0.1	0
Nitrate as Nitrogen	mg/L	1	1	49.7	49.7	49.7000	10	1
Nitrate/Nitrite	mg/L	1	1	551	551	551.0000	10	1
Potassium, ICAP	mg/L	2	2	7.39	2.8	5.0950	NR	NA
Sodium, ICAP	mg/L	2	2	114	11.5	62.7500	NR	NA
Strontium, ICAP	mg/L	2	2	0.804	0.161	0.4825	NR w	NA
Sulfate	mg/L	2	2	97.4	16	56.7000	250	0
Tetrachloroethene	ug/L	2	2	490 D	100	295.0000	5	2
Thallium, ICAP	mg/L	2	1	0.0087	0.0087	0.0087	0.002	1

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Thallium, PMS	mg/L	1	1	0.00144		0.00144	0.0014	0.002	0
Total Dissolved Solids	mg/L	2	2	3940		604	2272.0000	500	2
Trichloroethene	ug/L	2	2	260	D	47	153.5000	5	2
Turbidity	NTU	1	1	0.496		0.496	0.4960	1	0
Uranium, ICAP	mg/L	1	0					0.03	0
Uranium, PMS	mg/L	2	2	0.00458		0.0041	0.0043	0.03	0
Zinc, ICAP	mg/L	2	1	5.08		5.08	5.0800	5	1

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF						AREA NAME = S-3 Site					
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	3	1	3	J	3	J	3.0000	NR		NA
1,1-Dichloroethene	ug/L	5	1	1	J	1	J	1.0000	7		0
Alkalinity	mg/L	3	3	496		122		251.3333	NR		NA
Aluminum, ICAP	mg/L	5	1	0.219		0.219		0.2190	0.2		1
Barium, ICAP	mg/L	5	5	87.7		3.11		48.5640	2		5
Benzene	ug/L	5	1	1	J	1	J	1.0000	5		0
Bicarbonate	mg/L	5	5	776		122		459.8000	NR		NA
Boron, ICAP	mg/L	5	1	0.101		0.101		0.1010	NR	w	NA
Bromoform	ug/L	5	2	5	J	5	J	5.0000	100		0
Cadmium, ICAP	mg/L	5	1	1.37		1.37		1.3700	0.005	z	1
Cadmium, PMS	mg/L	3	1	1.26		1.26		1.2600	0.005		1
Calcium, ICAP	mg/L	5	5	11300		729		6373.6000	NR		NA
Chloride	mg/L	5	5	199		11.1		95.2400	250		0
Chloroform	ug/L	5	3	35		8		25.6667	100		0
Chloromethane	ug/L	5	1	8	J	8	J	8.0000	NR		NA
Chromium, ICAP	mg/L	5	1	0.054		0.054		0.0540	0.1	z	0
Chromium, PMS	mg/L	3	1	0.0554		0.0554		0.0554	0.1		0
Cobalt, ICAP	mg/L	5	2	0.151		0.146		0.1485	NR		NA
Flouride	mg/L	5	1	3.88		3.88		3.8800			0
Gross Alpha Activity	pCi/L	5	2	331		68.9		199.9500	15		2
Gross Beta Activity	pCi/L	5	3	18400		2800		12033.3333	50		3
Iron, ICAP	mg/L	5	1	0.0919		0.0919		0.0919	0.3		0
Lead, ICAP	mg/L	5	0						0.015		0
Lead, PMS	mg/L	3	1	0.00487		0.00487		0.0049	0.015		0
Lithium, ICAP	mg/L	5	4	0.749		0.035		0.3268	NR	w	NA
Magnesium, ICAP	mg/L	5	5	1450		115		754.2000	NR		NA
Manganese, ICAP	mg/L	5	5	141		0.052		71.2834	0.05		5
Mercury, CVAA	mg/L	5	1	0.00563		0.00563		0.0056	0.002		1
Methylene chloride	ug/L	5	1	12		12		12.0000	5		1
Nickel, ICAP	mg/L	5	3	2		0.182		0.7927	0.1	z	3
Nickel, PMS	mg/L	3	3	2.53		0.0448		0.8772	0.1		1
Nitrate as Nitrogen	mg/L	3	3	9350		702		3588.3333	10		3
Nitrate/Nitrite	mg/L	2	2	6580		6370		6475.0000	10		2
Potassium, ICAP	mg/L	5	5	87.5		12.3		32.0000	NR		NA
Sodium, ICAP	mg/L	5	5	501		20.3		285.5400	NR		NA
Strontium, ICAP	mg/L	5	5	69		2.08		29.4960	NR	w	NA
Sulfate	mg/L	5	3	17.6		5.85		10.3167	250		0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Technetium-99	pCi/L	3	3	30000	7100	22033.3333	4000	3
Tetrachloroethene	ug/L	5	3	99	4 J	35.6667	5	1
Thallium, ICAP	mg/L	5	0				0.002	0
Thallium, PMS	mg/L	3	1	0.0016	0.0016	0.0016	0.002	0
Total Dissolved Solids	mg/L	3	3	52100	3220	19706.6667	500	3
Total Suspended Solids	mg/L	3	2	4	4	4.0000	NR	NA
Trichloroethene	ug/L	5	3	4 J	2 J	3.0000	5	0
Turbidity	NTU	3	3	2.66	0.15	1.6267	1	2
Uranium	mg/L	2	2	0.0166	0.0143	0.0155	0.03	0
Uranium, ICAP	mg/L	3	0				0.03	0
Uranium, PMS	mg/L	3	3	0.0226	0.00093	0.0087	0.03	0
Uranium-233/234	pCi/L	1	1	0.00199	0.00199	0.0020	20	0
Uranium-234	pCi/L	1	1	3.2	3.2	3.2000	20	0
Uranium-235	pCi/L	1	0				24	0
Uranium-235/236	pCi/L	1	1	0.164	0.164	0.1640	20	0
Uranium-236	pCi/L	1	0				20	0
Uranium-238	pCi/L	2	2	14.2	5.9	10.0500	24	0

TABLE 4.34. (continued)

REGIME =EF AREA NAME = Union Valley - Exit Pathway

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Aluminum, ICAP	mg/L	4	4	0.83	0.247	0.5045	0.2	4
Barium, ICAP	mg/L	4	4	0.148	0.0272	0.0840	2	0
Bicarbonate	mg/L	4	2	182	156	169.0000	NR	NA
Boron, ICAP	mg/L	4	2	0.0167	0.0161	0.0164	NR	NA
Calcium, ICAP	mg/L	4	4	122 N	58.8	89.4750	NR	NA
Carbon Tetrachloride	ug/L	8	2	4 J	3	3.5000	5	0
Carbonate	mg/L	4	2	41	32.3	36.6500	NR	NA
Chloride	mg/L	4	4	7.1	1.4	4.2750	250	0
Chloroform	ug/L	8	3	2 J	2 J	2.0000	100	0
Copper, ICAP	mg/L	4	1	0.0089	0.0089	0.0089	1.3	0
Flouride	mg/L	4	3	0.23	0.12	0.1567		0
Gross Alpha Activity	pCi/L	4	2	2.28	1.75	2.0150	15	0
Gross Beta Activity	pCi/L	4	3	16.7	6.58	11.4267	50	0
Iron, ICAP	mg/L	4	4	1.41 *N	0.375	0.8630	0.3	4
Lithium, ICAP	mg/L	4	2	0.0439	0.043	0.0435	NR	NA
Magnesium, ICAP	mg/L	4	4	4.28	2.51	3.3925	NR	NA
Manganese, ICAP	mg/L	4	4	0.0228	0.0074	0.0135	0.05	0
Nitrate/Nitrite	mg/L	4	4	0.81	0.23	0.5125	10	0
Potassium, ICAP	mg/L	4	4	15.9 E	2.25	9.0775	NR	NA
Sodium, ICAP	mg/L	4	4	7.47	1.06	4.1650	NR	NA
Strontium, ICAP	mg/L	4	4	0.617	0.0721	0.3445	NR	NA
Sulfate	mg/L	4	4	6.3	4	5.5250	250	0
Tetrachloroethene	ug/L	8	4	2 J	1	1.5000	5	0
Total Dissolved Solids	mg/L	8	8	601	179	307.1250	500	1
Total Suspended Solids	mg/L	8	7	45	6	15.0000	NR	NA
Trichloroethene	ug/L	8	2	1 J	1 J	1.0000	5	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Uranium Oxide Vault					
Alkalinity	mg/L	1	1	307	307	307.0000	NR		NA
Barium, ICAP	mg/L	1	1	0.0782	0.0782	0.0782	2		0
Bicarbonate	mg/L	1	1	307	307	307.0000	NR		NA
Calcium, ICAP	mg/L	1	1	127	127	127.0000	NR		NA
Chloride	mg/L	1	1	2.47	2.47	2.4700	250		0
Gross Alpha Activity	pCi/L	1	1	260	260	260.0000	15		1
Gross Beta Activity	pCi/L	1	1	65	65	65.0000	50		1
Magnesium, ICAP	mg/L	1	1	12.8	12.8	12.8000	NR		NA
Nickel, ICAP	mg/L	1	0				0.1		0
Nickel, PMS	mg/L	1	1	0.0202	0.0202	0.0202	0.1		0
Nitrate as Nitrogen	mg/L	1	1	0.111	0.111	0.1110	10		0
Potassium, ICAP	mg/L	1	1	3.45	3.45	3.4500	NR		NA
Sodium, ICAP	mg/L	1	1	12.4	12.4	12.4000	NR		NA
Strontium, ICAP	mg/L	1	1	0.216	0.216	0.2160	NR	w	NA
Sulfate	mg/L	1	1	67.7	67.7	67.7000	250		0
Total Dissolved Solids	mg/L	1	1	421	421	421.0000	500		0
Turbidity	NTU	1	1	0.616	0.616	0.6160	1		0
Uranium, ICAP	mg/L	1	0				0.03		0
Uranium, PMS	mg/L	1	1	0.746	0.746	0.7460	0.03		1

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Waste Coolant Processing Facility							
1,1,1-Trichloroethane	ug/L	3	3	59		7		26.6667	200		0
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	3	3	3600	D	790	D	1796.6667	NR		NA
1,1-Dichloroethane	ug/L	3	3	57		25		41.3333	NR		NA
1,1-Dichloroethene	ug/L	3	3	72		25		54.3333	7		3
1,2-Dichloroethene	ug/L	3	3	1600	D	1000	D	1233.3333	NR		NA
Alkalinity	mg/L	3	3	216		68.6		144.5333	NR		NA
Barium, ICAP	mg/L	3	3	0.212		0.121		0.1703	2		0
Bicarbonate	mg/L	3	3	216		68.6		144.5333	NR		NA
Calcium, ICAP	mg/L	3	3	87.4		27.7		57.3667	NR		NA
Chloride	mg/L	3	3	17.3		10.7		13.1667	250		0
cis-1,2-Dichloroethene	ug/L	3	3	1600	D	1000	D	1233.3333	70		3
Dichlorodifluoromethane	ug/L	3	3	48		7		21.0000	NR		NA
Gross Alpha Activity	pCi/L	3	1	4.3		4.3		4.3000	15		0
Gross Beta Activity	pCi/L	3	0						50		0
Lead, ICAP	mg/L	3	0						0.015		0
Lead, PMS	mg/L	3	2	0.00314		0.00263		0.0029	0.015		0
Magnesium, ICAP	mg/L	3	3	8.7		4.32		6.4067	NR		NA
Manganese, ICAP	mg/L	3	1	0.00677		0.00677		0.0068	0.05		0
Nitrate as Nitrogen	mg/L	3	3	3.93		1.7		2.5367	10		0
Sodium, ICAP	mg/L	3	3	7.16		5.13		6.1633	NR		NA
Strontium, ICAP	mg/L	3	3	0.229		0.114		0.1680	NR	w	NA
Sulfate	mg/L	3	3	12.6		9.12		10.8400	250		0
Tetrachloroethene	ug/L	3	3	1100	D	270	D	630.0000	5		3
Total Dissolved Solids	mg/L	3	3	305		138		218.6667	500		0
Total Suspended Solids	mg/L	3	1	1		1		1.0000	NR		NA
trans-1,2-Dichloroethene	ug/L	3	3	19		10		13.3333	100		0
Trichloroethene	ug/L	3	3	430	D	200		283.3333	5		3
Turbidity	NTU	3	3	0.366		0.195		0.2860	1		0
Uranium, ICAP	mg/L	3	0						0.03		0
Uranium, PMS	mg/L	3	1	0.00114		0.00114		0.0011	0.03		0
Vinyl Chloride	ug/L	3	3	17		13		15.0000	2		3

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Y-12 Fuel Station				
1,2-Dichloropropane	ug/L	2	1	11	11	11.0000	5	1

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Y-12 Grid Well B2					
Alkalinity	mg/L	1	1	142	142	142.0000	NR		NA
Barium, ICAP	mg/L	1	1	0.0968	0.0968	0.0968	2		0
Bicarbonate	mg/L	1	1	142	142	142.0000	NR		NA
Calcium, ICAP	mg/L	1	1	145	145	145.0000	NR		NA
Chloride	mg/L	1	1	209	209	209.0000	250		0
Chromium, ICAP	mg/L	1	1	0.163	0.163	0.1630	0.1	z	1
Chromium, PMS	mg/L	1	1	0.149	0.149	0.1490	0.1		1
Gross Alpha Activity	pCi/L	1	0				15		0
Gross Beta Activity	pCi/L	1	0				50		0
Iron, ICAP	mg/L	1	1	1.13	1.13	1.1300	0.3		1
Lithium, ICAP	mg/L	1	1	0.0286	0.0286	0.0286	NR	w	NA
Magnesium, ICAP	mg/L	1	1	17.2	17.2	17.2000	NR		NA
Manganese, ICAP	mg/L	1	1	0.344	0.344	0.3440	0.05		1
Nickel, ICAP	mg/L	1	1	0.456	0.456	0.4560	0.1	z	1
Nickel, PMS	mg/L	1	1	0.448	0.448	0.4480	0.1		1
Nitrate as Nitrogen	mg/L	1	1	8.76	8.76	8.7600	10		0
Potassium, ICAP	mg/L	1	1	2.24	2.24	2.2400	NR		NA
Sodium, ICAP	mg/L	1	1	26.8	26.8	26.8000	NR		NA
Strontium, ICAP	mg/L	1	1	0.267	0.267	0.2670	NR	w	NA
Sulfate	mg/L	1	1	86	86	86.0000	250		0
Total Dissolved Solids	mg/L	1	1	843	843	843.0000	500		1
Total Suspended Solids	mg/L	1	1	2	2	2.0000	NR		NA
Turbidity	NTU	1	1	12.8	12.8	12.8000	1		1

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Y-12 Grid Well B3							
1,1,1-Trichloroethane	ug/L	3	2	2	J	2	J	2.0000	200		0
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	3	3	390	D	270	D	336.6667	NR		NA
1,1-Dichloroethane	ug/L	3	3	19		13		15.3333	NR		NA
1,1-Dichloroethene	ug/L	3	3	20		17		18.3333	7		3
1,2-Dichloroethene	ug/L	3	3	760	D	630	D	696.6667	NR		NA
Alkalinity	mg/L	3	3	204		131		156.3333	NR		NA
Barium, ICAP	mg/L	3	3	1.36		0.96		1.1133	2		0
Bicarbonate	mg/L	3	3	204		131		156.3333	NR		NA
Calcium, ICAP	mg/L	3	3	384		260		336.3333	NR		NA
Chloride	mg/L	3	3	14.5		13.1		13.9000	250		0
cis-1,2-Dichloroethene	ug/L	3	3	760	D	630	D	696.6667	70		3
Dichlorodifluoromethane	ug/L	3	2	12		10		11.0000	NR		NA
Gross Alpha Activity	pCi/L	3	1	23		23		23.0000	15		1
Gross Beta Activity	pCi/L	3	2	59		30		44.5000	50		1
Iron, ICAP	mg/L	3	2	0.108		0.0576		0.0828	0.3		0
Lithium, ICAP	mg/L	3	3	0.0553		0.0197		0.0325	NR	w	NA
Magnesium, ICAP	mg/L	3	3	45.7		32.2		37.0333	NR		NA
Manganese, ICAP	mg/L	3	3	0.815		0.471		0.6100	0.05		3
Nickel, ICAP	mg/L	3	0						0.1		0
Nickel, PMS	mg/L	3	3	0.0129		0.00616		0.0094	0.1		0
Nitrate as Nitrogen	mg/L	3	3	271		230		247.6667	10		3
Potassium, ICAP	mg/L	3	3	14		3.15		6.8233	NR		NA
Sodium, ICAP	mg/L	3	3	89.7		11.2		37.5667	NR		NA
Strontium, ICAP	mg/L	3	3	5.6		1.2		2.6833	NR	w	NA
Sulfate	mg/L	3	3	20.6		17.7		19.3667	250		0
Tetrachloroethene	ug/L	3	3	680	D	480	D	560.0000	5		3
Total Dissolved Solids	mg/L	3	3	1980		1440		1663.3333	500		3
trans-1,2-Dichloroethene	ug/L	3	3	8		8		8.0000	100		0
Trichloroethene	ug/L	3	3	230	D	210	D	220.0000	5		3
Turbidity	NTU	3	3	2.05		0.854		1.3480	1		2
Vinyl Chloride	ug/L	3	3	16		13		14.3333	2		3

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Y-12 Grid Well C3						
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	3	1	5		5	5.0000	NR		NA
1,1-Dichloroethene	ug/L	3	1	16		16	16.0000	7		1
1,2-Dichloroethene	ug/L	3	2	960	D	76	518.0000	NR		NA
Alkalinity	mg/L	3	3	219		175	196.3333	NR		NA
Barium, ICAP	mg/L	3	3	0.133		0.0564	0.1008	2		0
Bicarbonate	mg/L	3	3	219		175	196.3333	NR		NA
Boron, ICAP	mg/L	3	3	1.15		0.107	0.4620	NR	w	NA
Calcium, ICAP	mg/L	3	3	106		5.71	67.4700	NR		NA
Chloride	mg/L	3	3	32.3		13.9	23.2000	250		0
cis-1,2-Dichloroethene	ug/L	3	2	950	D	76	513.0000	70		2
Flouride	mg/L	3	1	0.503		0.503	0.5030			0
Gross Alpha Activity	pCi/L	3	2	4.1		3	3.5500	15		0
Gross Beta Activity	pCi/L	3	0					50		0
Iron, ICAP	mg/L	3	2	0.139		0.0942	0.1166	0.3		0
Lithium, ICAP	mg/L	3	3	0.0817		0.0143	0.0380	NR	w	NA
Magnesium, ICAP	mg/L	3	3	12.9		1.78	7.5967	NR		NA
Nickel, ICAP	mg/L	3	0					0.1		0
Nickel, PMS	mg/L	3	1	0.0229		0.0229	0.0229	0.1		0
Nitrate as Nitrogen	mg/L	3	2	1.57		0.404	0.9870	10		0
Potassium, ICAP	mg/L	3	3	4.54		2.4	3.2433	NR		NA
Sodium, ICAP	mg/L	3	3	123		8.63	47.8433	NR		NA
Strontium, ICAP	mg/L	3	3	0.333		0.252	0.2993	NR	w	NA
Sulfate	mg/L	3	3	104		25.8	66.9667	250		0
Tetrachloroethene	ug/L	3	3	900	D	6	472.0000	5		3
Total Dissolved Solids	mg/L	3	3	377		339	361.3333	500		0
trans-1,2-Dichloroethene	ug/L	3	1	9		9	9.0000	100		0
Trichloroethene	ug/L	3	2	410	D	58	234.0000	5		2
Turbidity	NTU	3	3	1.62		0.133	1.0743	1		2
Vinyl Chloride	ug/L	3	1	40		40	40.0000	2		1

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Y-12 Grid Well D2							
Alkalinity	mg/L	2	2	204		87.7		145.8500	NR		NA
Barium, ICAP	mg/L	2	2	0.244		0.117		0.1805	2		0
Bicarbonate	mg/L	2	2	204		87.7		145.8500	NR		NA
Calcium, ICAP	mg/L	2	2	64.3		60.7		62.5000	NR		NA
Chloride	mg/L	2	2	36.8		7.91		22.3550	250		0
Chromium, ICAP	mg/L	2	1	0.029		0.029		0.0290	0.1	z	0
Chromium, PMS	mg/L	2	1	0.0284		0.0284		0.0284	0.1		0
Gross Alpha Activity	pCi/L	2	0						15		0
Gross Beta Activity	pCi/L	2	1	28		28		28.0000	50		0
Iron, ICAP	mg/L	2	1	0.481		0.481		0.4810	0.3		1
Lead, ICAP	mg/L	2	0						0.015		0
Lead, PMS	mg/L	2	1	0.00274		0.00274		0.0027	0.015		0
Lithium, ICAP	mg/L	2	1	0.0116		0.0116		0.0116	NR	w	NA
Magnesium, ICAP	mg/L	2	2	13.6		5.67		9.6350	NR		NA
Manganese, ICAP	mg/L	2	2	0.0371		0.016		0.0266	0.05		0
Nickel, ICAP	mg/L	2	1	0.175		0.175		0.1750	0.1	z	1
Nickel, PMS	mg/L	2	1	0.159		0.159		0.1590	0.1		1
Nitrate as Nitrogen	mg/L	2	1	5.05		5.05		5.0500	10		0
Sodium, ICAP	mg/L	2	2	11.3		6.78		9.0400	NR		NA
Strontium, ICAP	mg/L	2	2	0.387		0.109		0.2480	NR	w	NA
Sulfate	mg/L	2	2	31		10.5		20.7500	250		0
Tetrachloroethene	ug/L	2	2	30		3	J	16.5000	5		1
Total Dissolved Solids	mg/L	2	2	309		265		287.0000	500		0
Total Suspended Solids	mg/L	2	1	1		1		1.0000	NR		NA
Turbidity	NTU	2	2	4.71		0.351		2.5305	1		1

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Y-12 Grid Well E1					
Alkalinity	mg/L	1	1	324	324	324.0000	NR		NA
Barium, ICAP	mg/L	1	1	0.164	0.164	0.1640	2		0
Bicarbonate	mg/L	1	1	324	324	324.0000	NR		NA
Calcium, ICAP	mg/L	1	1	125	125	125.0000	NR		NA
Chloride	mg/L	1	1	29.1	29.1	29.1000	250		0
Gross Alpha Activity	pCi/L	1	0				15		0
Gross Beta Activity	pCi/L	1	0				50		0
Iron, ICAP	mg/L	1	1	0.0651	0.0651	0.0651	0.3		0
Lithium, ICAP	mg/L	1	1	0.0168	0.0168	0.0168	NR	w	NA
Magnesium, ICAP	mg/L	1	1	13	13	13.0000	NR		NA
Manganese, ICAP	mg/L	1	1	0.299	0.299	0.2990	0.05		1
Sodium, ICAP	mg/L	1	1	10.9	10.9	10.9000	NR		NA
Strontium, ICAP	mg/L	1	1	0.179	0.179	0.1790	NR	w	NA
Sulfate	mg/L	1	1	10.4	10.4	10.4000	250		0
Total Dissolved Solids	mg/L	1	1	405	405	405.0000	500		0
Turbidity	NTU	1	1	0.545	0.545	0.5450	1		0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Y-12 Grid Well E3							
1,1,1-Trichloroethane	ug/L	3	1	3	J	3	J	3.0000	200		0
1,1-Dichloroethane	ug/L	3	2	92		13		52.5000	NR		NA
1,1-Dichloroethene	ug/L	3	2	46		5		25.5000	7		1
1,2-Dichloroethene	ug/L	3	2	26		8		17.0000	NR		NA
Alkalinity	mg/L	3	3	231		190		204.3333	NR		NA
Barium, ICAP	mg/L	3	3	0.509		0.12		0.2940	2		0
Bicarbonate	mg/L	3	3	231		190		204.3333	NR		NA
Boron, ICAP	mg/L	3	2	0.528		0.121		0.3245	NR	w	NA
Calcium, ICAP	mg/L	3	3	91.4		8.51		58.4367	NR		NA
Chloride	mg/L	3	3	33.8		6.51		18.5700	250		0
Chloroethane	ug/L	3	1	13		13		13.0000	NR		NA
cis-1,2-Dichloroethene	ug/L	3	2	25		6		15.5000	70		0
Gross Alpha Activity	pCi/L	3	2	25		15		20.0000	15		1
Gross Beta Activity	pCi/L	3	3	16		8.1		11.3667	50		0
Iron, ICAP	mg/L	3	1	0.229		0.229		0.2290	0.3		0
Lead, ICAP	mg/L	3	0						0.015		0
Lead, PMS	mg/L	3	2	0.00934		0.00217		0.0058	0.015		0
Lithium, ICAP	mg/L	3	2	0.0619		0.0187		0.0403	NR	w	NA
Magnesium, ICAP	mg/L	3	3	15.6		2.93		8.1967	NR		NA
Manganese, ICAP	mg/L	3	1	0.0869		0.0869		0.0869	0.05		1
Nickel, ICAP	mg/L	3	1	0.0742		0.0742		0.0742	0.1	z	0
Nickel, PMS	mg/L	3	1	0.0767		0.0767		0.0767	0.1		0
Nitrate as Nitrogen	mg/L	3	3	1.04		0.111		0.4237	10		0
Potassium, ICAP	mg/L	3	2	5.54		4.82		5.1800	NR		NA
Sodium, ICAP	mg/L	3	3	80.6		9.39		35.9300	NR		NA
Strontium, ICAP	mg/L	3	3	1.16		0.211		0.6167	NR	w	NA
Sulfate	mg/L	3	3	26.7		8.65		16.7167	250		0
Tetrachloroethene	ug/L	3	3	92		1	J	34.6667	5		2
Total Dissolved Solids	mg/L	3	3	303		244		280.0000	500		0
trans-1,2-Dichloroethene	ug/L	3	2	2	J	1	J	1.5000	100		0
Trichloroethene	ug/L	3	2	45		6		25.5000	5		2
Turbidity	NTU	3	3	1.5		0.095		0.5993	1		1
Uranium, ICAP	mg/L	3	0						0.03		0
Uranium, PMS	mg/L	3	2	0.00112		0.000755		0.0009	0.03		0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Y-12 Grid Well F2					
Alkalinity	mg/L	4	4	286	193	234.5000	NR		NA
Barium, ICAP	mg/L	4	4	0.216	0.104	0.1800	2		0
Bicarbonate	mg/L	4	4	286	144	220.5000	NR		NA
Boron, ICAP	mg/L	4	2	0.181	0.176	0.1785	NR	w	NA
Calcium, ICAP	mg/L	4	4	113	3.23	56.9475	NR		NA
Carbonate	mg/L	4	1	56.8	56.8	56.8000	NR		NA
Chloride	mg/L	4	4	34.2	7.69	19.1425	250		0
Flouride	mg/L	4	2	0.524	0.503	0.5135			0
Gross Alpha Activity	pCi/L	4	1	7.5	7.5	7.5000	15		0
Gross Beta Activity	pCi/L	4	1	8.6	8.6	8.6000	50		0
Iron, ICAP	mg/L	4	2	1.62	1.47	1.5450	0.3		2
Lead, ICAP	mg/L	4	0				0.015		0
Lead, PMS	mg/L	4	2	0.00246	0.00191	0.0022	0.015		0
Lithium, ICAP	mg/L	4	4	0.0379	0.0105	0.0238	NR	w	NA
Magnesium, ICAP	mg/L	4	4	19.9	2.11	10.8250	NR		NA
Manganese, ICAP	mg/L	4	2	0.376	0.291	0.3335	0.05		2
Nitrate as Nitrogen	mg/L	4	1	0.0565	0.0565	0.0565	10		0
Potassium, ICAP	mg/L	4	4	3.28	2.54	2.9200	NR		NA
Sodium, ICAP	mg/L	4	4	96	24.8	59.7750	NR	k	NA
Strontium, ICAP	mg/L	4	4	1.87	0.375	1.0923	NR	w	NA
Sulfate	mg/L	4	4	88.5	8.04	40.6150	250		0
Total Dissolved Solids	mg/L	4	4	499	234	360.0000	500		0
Total Suspended Solids	mg/L	4	2	3	1	2.0000	NR		NA
Turbidity	NTU	4	4	19.6	0.806	8.5928	1		2

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
		REGIME =EF		AREA NAME = Y-12 Grid Well G3					
1,1,1-Trichloroethane	ug/L	4	1	1 J	1 J	1.0000	200		0
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	4	2	2 J	1 J	1.5000	NR		NA
1,1-Dichloroethene	ug/L	4	2	2 J	1 J	1.5000	7		0
1,2-Dichloroethene	ug/L	4	2	4 J	3 J	3.5000	NR		NA
Alkalinity	mg/L	4	4	222	146	182.7500	NR		NA
Aluminum, ICAP	mg/L	4	1	0.658	0.658	0.6580	0.2		1
Barium, ICAP	mg/L	4	4	0.401	0.0578	0.2201	2		0
Bicarbonate	mg/L	4	4	222	146	182.7500	NR		NA
Calcium, ICAP	mg/L	4	4	83.6	53.5	69.7750	NR		NA
Carbon Tetrachloride	ug/L	4	4	170	22	76.0000	5		4
Chloride	mg/L	4	4	16.7	2.45	9.6175	250		0
Chloroform	ug/L	4	4	5 J	2 J	3.2500	100		0
Chromium, ICAP	mg/L	4	0				0.1		0
Chromium, PMS	mg/L	4	1	0.0303	0.0303	0.0303	0.1		0
cis-1,2-Dichloroethene	ug/L	4	2	4 J	3 J	3.5000	70		0
Flouride	mg/L	4	2	0.219	0.214	0.2165			0
Gross Alpha Activity	pCi/L	4	2	14	5.8	9.9000	15		0
Gross Beta Activity	pCi/L	4	2	16	8.4	12.2000	50		0
Iron, ICAP	mg/L	4	3	0.612	0.0679	0.2610	0.3		1
Lead, ICAP	mg/L	4	0				0.015		0
Lead, PMS	mg/L	4	3	0.0114	0.000715	0.0073	0.015		0
Lithium, ICAP	mg/L	4	2	0.0163	0.0152	0.0158	NR	w	NA
Magnesium, ICAP	mg/L	4	4	10.4	4.51	7.4050	NR		NA
Manganese, ICAP	mg/L	4	2	0.0187	0.00603	0.0124	0.05		0
Nitrate as Nitrogen	mg/L	4	4	1.32	0.309	0.7433	10		0
Potassium, ICAP	mg/L	4	3	3.07	2.53	2.7600	NR		NA
Sodium, ICAP	mg/L	4	4	7.18	5.9	6.5050	NR		NA
Strontium, ICAP	mg/L	4	4	0.388	0.0744	0.2259	NR	w	NA
Sulfate	mg/L	4	4	22.1	17.6	19.6500	250		0
Tetrachloroethene	ug/L	4	2	22	16	19.0000	5		2
Total Dissolved Solids	mg/L	4	4	299	184	245.5000	500		0
Total Suspended Solids	mg/L	4	1	3	3	3.0000	NR		NA
Trichloroethene	ug/L	4	2	6	4 J	5.0000	5		1
Turbidity	NTU	4	4	7.9	0.209	2.3215	1		1
Uranium, ICAP	mg/L	4	0				0.03		0
Uranium, PMS	mg/L	4	3	0.00197	0.000515	0.0011	0.03		0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Y-12 Grid Well H3					
Alkalinity	mg/L	2	2	209	202	205.5000	NR		NA
Barium, ICAP	mg/L	2	2	0.212	0.0862	0.1491	2		0
Bicarbonate	mg/L	2	2	209	202	205.5000	NR		NA
Calcium, ICAP	mg/L	2	2	98.7	98.2	98.4500	NR		NA
Chloride	mg/L	2	2	34.7	31.8	33.2500	250		0
Chromium, ICAP	mg/L	2	1	0.0261	0.0261	0.0261	0.1	z	0
Chromium, PMS	mg/L	2	1	0.0106	0.0106	0.0106	0.1		0
Gross Alpha Activity	pCi/L	2	0				15		0
Gross Beta Activity	pCi/L	2	1	8.3	8.3	8.3000	50		0
Iron, ICAP	mg/L	2	1	0.589	0.589	0.5890	0.3		1
Lead, ICAP	mg/L	2	0				0.015		0
Lead, PMS	mg/L	2	1	0.00255	0.00255	0.0026	0.015		0
Lithium, ICAP	mg/L	2	1	0.01	0.01	0.0100	NR	w	NA
Magnesium, ICAP	mg/L	2	2	8.02	5.43	6.7250	NR		NA
Manganese, ICAP	mg/L	2	1	0.0193	0.0193	0.0193	0.05		0
Nickel, ICAP	mg/L	2	1	0.453	0.453	0.4530	0.1	z	1
Nickel, PMS	mg/L	2	1	0.442	0.442	0.4420	0.1		1
Nitrate as Nitrogen	mg/L	2	2	0.989	0.454	0.7215	10		0
Potassium, ICAP	mg/L	2	2	2.75	2.68	2.7150	NR		NA
Sodium, ICAP	mg/L	2	2	11.4	5.26	8.3300	NR		NA
Strontium, ICAP	mg/L	2	2	0.249	0.165	0.2070	NR	w	NA
Sulfate	mg/L	2	2	35.4	31.7	33.5500	250		0
Total Dissolved Solids	mg/L	2	2	326	319	322.5000	500		0
Trichloroethene	ug/L	2	2	3 J	2 J	2.5000	5		0
Turbidity	NTU	2	2	3.6	0.279	1.9395	1		1

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Y-12 Grid Well J-Primary				
1,1,1-Trichloroethane	ug/L	3	1	2	2	2.0000	200	0
1,1-Dichloroethane	ug/L	3	1	12	12	12.0000	NR	NA
1,2-Dichloroethene	ug/L	3	3	67 J D	3 J	33.6667	NR	NA
Alkalinity	mg/L	1	1	276	276	276.0000	NR	NA
Barium, ICAP	mg/L	3	3	0.526	0.0588	0.3573	2	0
Bicarbonate	mg/L	3	3	276	248	263.3333	NR	NA
Boron, ICAP	mg/L	3	2	0.0729	0.0712	0.0721	NR	NA
Calcium, ICAP	mg/L	3	3	112	76.6 N	88.8000	NR	NA
Chloride	mg/L	3	3	84.7	37.2	53.2000	250	0
cis-1,2-Dichloroethene	ug/L	3	3	67 J D	3 J	33.6667	70	0
Copper, ICAP	mg/L	3	2	0.0226	0.0097	0.0162	1.3	0
Flouride	mg/L	3	2	0.242	0.19	0.2160		0
Gross Alpha Activity	pCi/L	3	0				15	0
Gross Beta Activity	pCi/L	3	0				50	0
Iron, ICAP	mg/L	3	3	16.2	0.0116	5.4084	0.3	1
Lead, ICAP	mg/L	3	0				0.015	0
Lead, PMS	mg/L	1	1	0.00593	0.00593	0.0059	0.015	0
Lithium, ICAP	mg/L	3	2	0.0153 N	0.015	0.0152	NR	NA
Magnesium, ICAP	mg/L	3	3	22.8	15	20.1000	NR	NA
Manganese, ICAP	mg/L	3	3	0.49	0.048	0.1954	0.05	1
Methane	ug/L	2	1	20	20	20.0000	NR	NA
Nitrate/Nitrite	mg/L	2	2	0.03	0.021	0.0255	10	0
Potassium, ICAP	mg/L	3	2	3.36	3.32	3.3400	NR	NA
Sodium, ICAP	mg/L	3	3	22.7	10.9	14.8333	NR	NA
Strontium, ICAP	mg/L	3	3	0.732	0.231	0.5510	NR w	NA
Sulfate	mg/L	3	2	15.4	13.9	14.6500	250	0
Total Dissolved Solids	mg/L	3	3	401	339	375.6667	500	0
Total Suspended Solids	mg/L	3	1	21	21	21.0000	NR	NA
trans-1,2-Dichloroethene	ug/L	3	1	2	2	2.0000	100	0
Turbidity	NTU	1	1	203	203	203.0000	1	1
Vinyl Chloride	ug/L	3	1	5	5	5.0000	2	1
Zinc, ICAP	mg/L	3	2	0.0224	0.0135	0.0180	5	0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Y-12 Grid Well K1					
Alkalinity	mg/L	1	1	224	224	224.0000	NR		NA
Barium, ICAP	mg/L	1	1	0.159	0.159	0.1590	2		0
Bicarbonate	mg/L	1	1	224	224	224.0000	NR		NA
Calcium, ICAP	mg/L	1	1	36.7	36.7	36.7000	NR		NA
Chloride	mg/L	1	1	2.45	2.45	2.4500	250		0
Flouride	mg/L	1	1	0.278	0.278	0.2780			0
Gross Alpha Activity	pCi/L	1	1	3	3	3.0000	15		0
Gross Beta Activity	pCi/L	1	0				50		0
Iron, ICAP	mg/L	1	1	0.176	0.176	0.1760	0.3		0
Lithium, ICAP	mg/L	1	1	0.0216	0.0216	0.0216	NR	w	NA
Magnesium, ICAP	mg/L	1	1	8.74	8.74	8.7400	NR		NA
Manganese, ICAP	mg/L	1	1	0.0132	0.0132	0.0132	0.05		0
Nitrate as Nitrogen	mg/L	1	1	0.35	0.35	0.3500	10		0
Potassium, ICAP	mg/L	1	1	2.81	2.81	2.8100	NR		NA
Sodium, ICAP	mg/L	1	1	36.8	36.8	36.8000	NR		NA
Strontium, ICAP	mg/L	1	1	0.641	0.641	0.6410	NR	w	NA
Sulfate	mg/L	1	1	14.5	14.5	14.5000	250		0
Total Dissolved Solids	mg/L	1	1	234	234	234.0000	500		0
Turbidity	NTU	1	1	0.973	0.973	0.9730	1		0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Y-12 Grid Well K2					
Alkalinity	mg/L	1	1	242	242	242.0000	NR		NA
Barium, ICAP	mg/L	1	1	0.247	0.247	0.2470	2		0
Bicarbonate	mg/L	1	1	242	242	242.0000	NR		NA
Calcium, ICAP	mg/L	1	1	53.2	53.2	53.2000	NR		NA
Chloride	mg/L	1	1	10.6	10.6	10.6000	250		0
Flouride	mg/L	1	1	0.122	0.122	0.1220			0
Gross Alpha Activity	pCi/L	1	0				15		0
Gross Beta Activity	pCi/L	1	0				50		0
Lithium, ICAP	mg/L	1	1	0.0313	0.0313	0.0313	NR	w	NA
Magnesium, ICAP	mg/L	1	1	10.1	10.1	10.1000	NR		NA
Manganese, ICAP	mg/L	1	1	0.0907	0.0907	0.0907	0.05		1
Potassium, ICAP	mg/L	1	1	3.35	3.35	3.3500	NR		NA
Sodium, ICAP	mg/L	1	1	36.9	36.9	36.9000	NR		NA
Strontium, ICAP	mg/L	1	1	1.23	1.23	1.2300	NR	w	NA
Sulfate	mg/L	1	1	13.3	13.3	13.3000	250		0
Total Dissolved Solids	mg/L	1	1	276	276	276.0000	500		0
Turbidity	NTU	1	1	0.128	0.128	0.1280	1		0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Y-12 Plant Site					
1,1,1-Trichloroethane	ug/L	39	2	2 J	2 J	2.0000	200		0
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	39	7	170	5	61.4286	NR		NA
1,1-Dichloroethane	ug/L	39	11	50	1 J	13.7273	NR		NA
1,1-Dichloroethene	ug/L	39	11	190	2 J	63.4545	7		8
1,2-Dichloroethene	ug/L	39	16	2300 D	7	650.5625	NR		NA
1,2-Dichloropropane	ug/L	39	3	4 J	2 J	3.0000	5		0
1,4-Dichlorobenzene	ug/L	39	1	2 J	2 J	2.0000	75		0
1,4-Dioxane	ug/L	4	1	6 J	6 J	6.0000	NR		NA
Acetone	ug/L	39	0				NR		NA
Alkalinity	mg/L	39	39	352	88.9	204.9974	NR		NA
Aluminum, ICAP	mg/L	39	8	1.03	0.218	0.7008	0.2		8
Antimony, ICAP	mg/L	39	0				0.006		0
Antimony, PMS	mg/L	39	1	0.00276	0.00276	0.0028	0.006		0
Barium, ICAP	mg/L	39	39	0.427	0.041	0.1623	2		0
Benzene	ug/L	39	2	2 J	2 J	2.0000	5		0
Bicarbonate	mg/L	39	39	352	88.9	204.9974	NR		NA
Boron, ICAP	mg/L	39	13	0.76	0.108	0.2838	NR	w	NA
Calcium, ICAP	mg/L	39	39	314	1.63	77.0767	NR	k	NA
Chloride	mg/L	39	39	34.4	1.47	15.9456	250		0
Chloroform	ug/L	39	4	6	1 J	3.7500	100		0
Chromium, ICAP	mg/L	39	2	0.0643	0.0224	0.0434	0.1	z	0
Chromium, PMS	mg/L	39	2	0.0615	0.0207	0.0411	0.1		0
cis-1,2-Dichloroethene	ug/L	39	16	2200 D	7	643.0625	70		11
Dichlorodifluoromethane	ug/L	39	2	5	2 J	3.5000	NR		NA
Flouride	mg/L	39	19	2.38	0.102	0.5373			0
Gross Alpha Activity	pCi/L	39	6	78	4.9	19.2833	15		1
Gross Beta Activity	pCi/L	39	18	18	5.5	9.3556	50		0
Iron, ICAP	mg/L	39	26	1.37	0.0668	0.2958	0.3		5
Lead, ICAP	mg/L	39	0				0.015		0
Lead, PMS	mg/L	39	8	0.0121	0.000575	0.0033	0.015		0
Lithium, ICAP	mg/L	39	26	1.41	0.0102	0.1365	NR	w	NA
Magnesium, ICAP	mg/L	39	39	35.4	0.919	10.6251	NR	k	NA
Manganese, ICAP	mg/L	39	27	1.76	0.00582	0.2912	0.05	k	13
Nickel, ICAP	mg/L	39	2	0.143	0.0593	0.1012	0.1	z	1
Nickel, PMS	mg/L	39	14	0.148	0.0051	0.0275	0.1		1
Nitrate as Nitrogen	mg/L	39	20	184	0.0339	18.4078	10		2
Potassium, ICAP	mg/L	39	29	7.72	2.02	3.4721	NR		NA

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Sodium, ICAP	mg/L	39	39	179		2.48		35.1844	NR	k	NA
Strontium, ICAP	mg/L	39	39	1.63		0.0641		0.4631	NR	w	NA
Sulfate	mg/L	39	39	175		7.91		43.8003	250		0
Tetrachloroethene	ug/L	39	19	97000	D	1	J	13272.7895	5		15
Toluene	ug/L	39	2	10		3	J	6.5000	1000		0
Total Dissolved Solids	mg/L	39	39	1530		143		374.1795	500		2
Total Suspended Solids	mg/L	39	19	22		1		5.4211	NR		NA
Total Xylene	ug/L	39	1	3	J	3	J	3.0000	10000		0
trans-1,2-Dichloroethene	ug/L	39	9	80		2	J	30.8889	100		0
Trichloroethene	ug/L	39	17	8600	D	1	J	1396.7059	5		14
Turbidity	NTU	39	39	13.9		0.099		3.2752	1		23
Uranium, ICAP	mg/L	39	0						0.03		0
Uranium, PMS	mg/L	39	13	0.122		0.00052		0.0108	0.03		1
Vinyl Chloride	ug/L	39	10	400	D	1	J	128.9000	2		8
Zinc, ICAP	mg/L	39	1	0.123		0.123		0.1230	5		0

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME =EF				AREA NAME = Y-12 Salvage Yard				
1,1,1,2-Tetrachloroethane	ug/L	9	1	2 J	2 J	2.0000	NR	NA
1,1,1-Trichloroethane	ug/L	9	2	16	8	12.0000	200	0
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	9	2	35	33	34.0000	NR	NA
1,1-Dichloroethane	ug/L	9	1	6	6	6.0000	NR	NA
1,1-Dichloroethene	ug/L	9	2	160	130	145.0000	7	2
1,2-Dichloroethene	ug/L	9	4	66	1 J	33.2500	NR	NA
Alkalinity	mg/L	9	9	617	50.1	154.0667	NR	NA
Barium, ICAP	mg/L	9	9	147	0.0531	18.3699	2	3
Benzene	ug/L	9	1	180 D	180 D	180.0000	5	1
Bicarbonate	mg/L	9	9	617	50.1	154.0667	NR	NA
Bromoform	ug/L	9	1	7	7	7.0000	100	0
Calcium, ICAP	mg/L	9	9	9440	14.9	1436.3333	NR k	NA
Chloride	mg/L	9	9	59.7	4.09	21.9567	250	0
Chloroform	ug/L	9	4	19	2 J	6.7500	100	0
cis-1,2-Dichloroethene	ug/L	9	4	66	1 J	33.2500	70	0
Gross Alpha Activity	pCi/L	9	3	34	2.3	13.9667	15	1
Gross Beta Activity	pCi/L	9	3	4400	15	1478.0000	50	1
Iron, ICAP	mg/L	9	1	0.069	0.069	0.0690	0.3	0
Lead, ICAP	mg/L	9	0				0.015	0
Lead, PMS	mg/L	9	4	0.00136	0.00059	0.0010	0.015	0
Lithium, ICAP	mg/L	9	4	0.406	0.0107	0.1203	NR w	NA
Magnesium, ICAP	mg/L	9	9	1410	2.16	220.6933	NR k	NA
Manganese, ICAP	mg/L	9	4	64.6	0.0233	16.7756	0.05	3
Mercury, CVAA	mg/L	9	1	0.000371	0.000371	0.0004	0.002	0
Methylene chloride	ug/L	9	1	31	31	31.0000	5	1
Nickel, ICAP	mg/L	9	0				0.1	0
Nickel, PMS	mg/L	9	5	0.166	0.0061	0.0637	0.1	2
Nitrate as Nitrogen	mg/L	9	8	8560	0.104	1425.9456	10	4
Potassium, ICAP	mg/L	9	3	34.8	4.61	14.9267	NR	NA
Sodium, ICAP	mg/L	9	9	246	5.56	49.6000	NR k	NA
Strontium, ICAP	mg/L	9	9	74.2	0.0368	9.5499	NR w	NA
Sulfate	mg/L	9	8	41.4	0.36	13.5063	250	0
Technetium-99	pCi/L	3	1	11000	11000	11000.0000	4000	1
Tetrachloroethene	ug/L	9	5	1700 D	14	357.0000	5	5
Total Dissolved Solids	mg/L	9	9	45500	109	6967.2222	500	4
Total Suspended Solids	mg/L	9	2	9	6	7.5000	NR	NA
Trichloroethene	ug/L	9	5	11	3 J	5.2000	5	1

TABLE 4.34. (continued)

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Turbidity	NTU	9	9	2.91	0.111	0.5226	1	1
Uranium, ICAP	mg/L	9	0				0.03	0
Uranium, PMS	mg/L	9	4	0.0794	0.00104	0.0239	0.03	1
Uranium-234	pCi/L	3	3	7.3	0.44	3.6467	20	0
Uranium-235	pCi/L	3	1	0.36	0.36	0.3600	24	0
Uranium-236	pCi/L	3	0				20	0
Uranium-238	pCi/L	3	2	7.9	1.7	4.8000	24	0
Vinyl Chloride	ug/L	9	1	2 J	2 J	2.0000	2	0

Definitions

BC	Bear Creek
CO3	Carbonate
CR	Chestnut Ridge
CVAA	Cool Vapor Atomic Absorption
EF	East Fork
HCO3	Bicarbonate
ICAP	Inductively Coupled Argon Plasma Spectroscopy
KPA	Kinetic Phosphorescence Analysis
mg/L	milligrams per liter
NA	Not Applicable
NR	No Reference
NTU	Nephelemetric Turbidity Units
pCi/L	picocuries per liter
PMS	Plasma Mass Spectroscopy
REF	Reference (Safe Drinking Water Act Maximum Contaminant Level)
µg/L	microgram per liter
µmhos/cm	micromhos per centimeter