DOE/ORO/2220

ENVIRONMENTAL MONITORING ON THE OAK RIDGE RESERVATION: 2005 RESULTS

Compiled by
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List of Tables

East Tennessee Technology Park

Table **Page**

Oak Ridge National Laboratory

ORR Surveillance

Y-12 National Security Complex

1. East Tennessee Technology Park

Table 1.1. 2005 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	14500	800	3140		
Total Suspended Solids	4	4.8	<2.0	<2.7		
pH, Standard Units	12	7.3	6.6	6.9	4.0 - 9.0	0
Oil & Grease	4	2.84	<5.0	<2.6		
		Discharge Point SD 100				
Flow, GPD	52	5864200	394000	852500		
Total Suspended Solids	4	2.0	<2.0	<1.60		
pH, Standard Units	52	7.9	6.3	7.3	6.0 - 9.0	0
Oil & Grease	4	2.16	<5.0	<4.3		
Total Residual Chlorine	52	1.25	0	<0.03	0.14	1
		Discharge Point SD 124				
Flow, GPD	4	725900	164300	359250		
Total Suspended Solids	1	2.6	2.6	2.6		
pH, Standard Units	4	7.9	6.9	7.5	6.0 - 9.0	0
		Discharge Point SD 142				
Flow, GPD	4	183000	50100	97100		
pH, Standard Units	4	8.1	7.1	7.7	4.0 - 9.0	0
Total Suspended Solids	1	7.6	7.6	7.6		
		Discharge Point SD 150				
Flow, GPD	3	666000	0	347630		
pH, Standard Units	3	7.6	7.0	7.3	4.0 - 9.0	0
Total Suspended Solids	1	1.2	1.2	1.2		
		Discharge Point SD 154				
Flow, GPD	11	279900	0	91350		
pH, Standard Units	11	7.9	6.8	7.3	4.0 - 9.0	0
Oil & Grease	4	3.6	<5.0	<3.1		
Total Suspended Solids	4	8.8	<2.0	<3.4		
		Discharge Point SD 158				
Flow, GPD	5	22800	0	15200		
pH, Standard Units	5	7.2	6.6	6.9	4.0 - 9.0	0
Oil & Grease	3	2.14	0.97	1.49		
Total Suspended Solids	3	6.4	1.73	3.3		
		Discharge Point SD 170				
Flow, GPD	12	2113700	96900	500120		
Total Suspended Solids	4	0.93	<2.0	<1.3		
pH, Standard Units	12	8.7	7.1	7.6	6.0 - 9.0	0
Oil & Grease	4	79.8	<5.0	<21.9		

Table 1.1 (continued)

Parameter	Number of samples	Concentration[a]			Reference Value[b]	No. of values exceeding reference
		Max	Min	Avg		
		Discharge Point SD 180				
Flow, GPD	12	1892800	100100	476330		
Total Suspended Solids	4	72.2	<2.0	<20.4		
pH, Standard Units	12	7.8	6.8	7.4	6.0 - 9.0	0
Oil & Grease	4	3.6	0.67	1.68		
		Discharge Point SD 190				
Flow, GPD	12	2333100	202800	732420		
Total Suspended Solids	4	29.6	2.4	13.1		
pH, Standard Units	12	7.3	6.6	7.0	6.0 - 9.0	0
Oil & Grease	4	3.8	<5.0	<3.7		
		Discharge Point SD 195				
Flow, GPD	9	49100	0	11030		
pH, Standard Units	9	7.5	6.9	7.2	4.0 - 9.0	0
Oil & Grease	4	1.49	0.86	1.19		
Total Suspended Solids	4	67.4	9.9	32.2		
		Discharge Point SD 198				
Flow, GPD	2	382100	189400	285750		
pH, Standard Units	2	7.7	7.5	7.6	4.0 - 9.0	0
		Discharge Point SD 210				
Flow, GPD	8	1313000	0	403700		
pH, Standard Units	8	7.6	6.6	7.2	4.0 - 9.0	0
Total Suspended Solids	4	58	4.3	20.0		
Oil & Grease	4	4.24	0.6	2.07		
		Discharge Point SD 230				
Flow, GPD	12	1503500	114300	454380		
pH, Standard Units	12	8.0	6.9	7.7	4.0 – 9.0	0
Oil & Grease	4	2.75	<5.0	<3.7		
Total Suspended Solids	4	2.4	<2.0	<2.0		
		Discharge Point SD 250				
Flow, GPD	2	43400	0	43100		
Total Suspended Solids	1	11.9	11.9	11.9		
pH, Standard Units	2	6.7	6.7	6.7	4.0 - 9.0	0
		Discharge Point SD 280				
Flow, GPD	9	91100	0	17000		
pH, Standard Units	9	8.1	6.6	7.5	4.0 – 9.0	0
Oil & Grease	4	2.96	0.74	1.79		
Total Suspended Solids	4	282	31.6	106.1		

Table 1.1 (continued)

Parameter	Number of samples	Concentration[a]			Reference Value[b]	No. of values exceeding reference
		Max	Min	Avg		
		Discharge Point SD 294				
Flow, GPD	5	150800	0	41940		
pH, Standard Units	5	7.2	6.9	7.1	4.0 - 9.0	0
Total Suspended Solids	4	185	1	48.6		
Oil & Grease	4	4.1	1.65	2.58		
		Discharge Point SD 334				
Flow, GPD	1	11000	0	11000		
pH, Standard Units	1	6.9	6.9	6.9	4.0 – 9.0	0
		Discharge Point SD 340				
Flow, GPD	11	653200	0	200530		
pH, Standard Units	11	7.9	7.1	7.4	4.0 - 9.0	0
Oil & Grease	4	2.1	<5.0	<2.5		
Total Suspended Solids	4	8.2	<2.0	<5.4		
		Discharge Point SD 350				
Flow, GPD	8	72300	0	14800		
pH, Standard Units	8	7.5	7.0	7.2	4.0 - 9.0	0
Oil & Grease	4	3.7	1.26	2.04		
Total Suspended Solids	4	77.2	9.2	47.9		
		Discharge Point SD 360				
Flow, GPD	4	9500	0	7130		
pH, Standard Units	4	7.3	6.7	6.9	4.0 – 9.0	0
Oil & Grease	3	2.06	1.72	1.89		
Total Suspended Solids	3	25.5	6.4	13.0		
		Discharge Point SD 380				
Flow, GPD	4	1326200	398700	729330		
pH, Standard Units	4	8.7	7.4	8.0	4.0 - 9.0	0
Total Suspended Solids	1	3.2	3.2	3.2		
		Discharge Point SD 382				
Flow, GPD	11	151700	0	46500		
pH, Standard Units	11	7.7	7.2	7.4	4.0 - 9.0	0
Oil & Grease	4	1.67	1.06	1.40		
Total Suspended Solids	4	2.25	<2.0	<1.8		
		Discharge Point SD 390				
Flow, GPD	5	108500	0	8574		
pH, Standard Units	5	6.9	6.8	6.9	4.0 - 9.0	0
Total Suspended Solids	3	15.6	1.56	7.05		
Oil & Grease	3	2.93	<5.0	<4.3		
		Discharge Point SD 410				
Flow, GPD	2	64500	25700	45100		
pH, Standard Units	2	7.5	6.8	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 430				
Flow, GPD	12	1233100	85600	360860		
pH, Standard Units	12	7.7	7.0	7.5	4.0 - 9.0	0
Oil & Grease	4	2.87	<5.0	<3.7		
Total Suspended Solids	4	2.29	<2.0	<2.0		
		Discharge Point SD 490				
Flow, GPD	12	5426900	405900	1503880		
pH, Standard Units	12	8.0	6.9	7.4	4.0 - 9.0	0
Oil & Grease	4	1.73	<5.0	<4.2		
Total Suspended Solids	4	282	<2.0	<71.9		
		Discharge Point SD 510				
Flow, GPD	4	961700	262000	508780		
Total Suspended Solids	1	15.2	15.2	15.2		
pH, Standard Units	4	7.6	6.3	6.9	4.0 - 9.0	0
		Discharge Point SD 532				
Flow, GPD	2	38400	13300	25850		
pH, Standard Units	2	7.1	6.7	6.9	4.0 - 9.0	0
		Discharge Point SD 570				
Flow, GPD	2	25900	0	25700		
pH, Standard Units	2	7.3	6.8	7.1	4.0 - 9.0	0
Total Suspended Solids	1	36.5	36.5	36.5		
		Discharge Point SD 660				
Flow, GPD	2	25800	2300	14050		
pH, Standard Units	2	7.9	7.7	7.8	4.0 - 9.0	0
		Discharge Point SD 690				
Flow, GPD	3	2315600	0	1208730		
Total Suspended Solids	1	9.8	9.8	9.8		
pH, Standard Units	3	7.3	6.8	7.0	4.0 - 9.0	0
		Discharge Point SD 710				
Flow, GPD	12	2733000	192600	801580		
Total Suspended Solids	4	4.6	<2.0	<2.6		
pH, Standard Units	12	7.4	6.9	7.2	4.0 - 9.0	0
Oil & Grease	4	1.79	<5.0	<3.2		
		Discharge Point SD 724				
Flow, GPD	6	1423000	0	95680		
pH, Standard Units	6	7.9	7.2	7.5	4.0 – 9.0	0
Total Suspended Solids	3	13.5	4.5	8.5		
Oil & Grease	3	2.26	1.59	1.83		

Table 1.1 (continued)

Parameter	Number of samples	Concentration[a]			Reference Value[b]	No. of values exceeding reference
		Max	Min	Avg		
		Discharge Point SD 890				
Flow, GPD	2	68400	0	67950		
pH, Standard Units	2	7.8	6.8	7.3	4.0 - 9.0	0
Total Suspended Solids	1	53.8	53.8	53.8		
		Discharge Point SD 900				
Flow, GPD	1	37800	0	37800		
pH, Standard Units	1	7.3	7.3	7.3	4.0 - 9.0	0
		Discharge Point SD 992				
Flow, GPD	6	132700	0	85180		
Total Suspended Solids	3	24.8	23.2	24		
pH, Standard Units	6	6.8	6.5	6.6	4.0 - 9.0	0
Oil & Grease	3	2.26	1.4	1.8		
		Discharge Point SD 996				
Flow, GPD	2	248800	78500	163650		
pH, Standard Units	2	7.3	7.0	7.1	4.0 – 9.0	0

[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]			
				CRK-16				
U-234	2	8.5e-01	<2.8e-01	5.7e-01	5.7e-01	5.0e+02	1.1e-01	1.1e-03
U-235	2	2.1e-01	<1.9e-02	1.1e-01	1.1e-01	6.0e+02`	1.8e-02	1.8e-04
All listed isotopes								1.3e-03

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

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

Radionuclide	No. of samples	Concentration (pCi/L)				DCG	Percent of DCG	Sum of the fractions of the DCGs
		Max	Min	Median[a]	Average[a]			
				K-716				
U-234	2	1.1e+00	<2.4e-01	6.7e-01	6.7e-01	5.0e+02	1.3e-01	1.3e-03
U-235	2	3.5e-01	<5.5e-02	2.0e-01	2.0e-01	6.0e+02	3.4e-02	3.4e-04
U-238	2	6.2e-01	3.3e-01	4.8e-01	4.8e-01	6.0e+02	7.9e-02	7.9e-04
Gross Alpha	2	2.0e+00	<5.8e-01	1.3e+00	1.3e+00	*b*	*b*	*b*
Gross Beta	2	4.1e+00	<3.3e+00	3.7e+00	3.7e+00	*b*	*b*	*b*
All listed Isotopes								2.4e-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-901-A (settling basin for surface water runoff)								
Tc-99	2	7.7e-00	<6.2e-00	6.9e-00	6.9e-00	1.0e+05	6.9e-03	6.9e-05
U-234	2	2.0e-00	1.1e-00	1.6e+00	1.6e+00	5.0e+02	3.1e-01	3.1e-03
U-238	2	1.6e+00	9.6e-01	1.3e-00	1.3e-00	6.0e+02	2.1e-01	2.1e-03
Gross Beta	2	8.2e+00	5.9e+00	7.1e+00	7.1e+00	*b*	*b*	*b*
All listed isotopes								5.3e-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 1.5. 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-1007-B (settling basin for surface water runoff)								
U-234	2	1.5e-00	9.8e-01	1.2e+00	1.2e+00	5.0e+02	2.4e-01	2.4e-03
U-235	2	4.7e-01	<1.3e-01	3.0e-01	3.0e-01	6.0e+02	5.1e-02	5.1e-04
U-238	2	7.6e-01	5.9e-01	6.8e-01	6.8e-01	6.0e+02	1.1e-01	1.1e-03
Beta Activity	2	5.7e+00	5.6e+00	5.7e+00	5.7e+00	*b*	*b*	*b*
All listed isoptopes								4.0e-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 1.6. 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-1407-J (treated effluents from Central Neutralization Facility and TSCA Incinerator)								
C-14	12	4.7e+03	7.9e+02	2.1e+03	2.1e+03	7.0e+04	3.1e-00	3.1e-02
H-3	12	1.1e+03	0.0e+00	0.0e+00	2.5e+02	2.0e+06	1.2e-02	1.2e-04
Pu-239	12	2.8e-01	0.0e+00	0.0e+00	3.7e-02	3.0e+01	1.2e-01	1.2e-03
Tc-99	12	4.4e+03	6.1e+02	1.8e+03	1.9e+03	1.0e+05	1.9e+00	1.9e-02
U-234	12	3.2e+01	6.0e+00	1.1e+01	1.4e+01	5.0e+02	2.9e+00	2.9e-02
U-235	12	5.0e+00	0.0e+00	1.0e+00	1.2e+00	6.0e+02	2.0e-01	2.0e-03
U-236	12	2.1e+00	0.0e+00	0.0e+00	3.8e-01	5.0e+02	7.7e-02	7.7e-04
U-238	12	9.3e+01	1.3e+01	2.6e+01	3.9e+01	6.0e+02	6.6e+00	6.6e-02
Gross Alpha	12	1.2e+02	1.2e+01	4.7e+01	5.3e+01	*b*	*b*	*b*
Gross Beta	12	1.2e+03	9.7e+01	4.8e+02	5.8e+02	*b*	*b*	*b*
All listed Isotopes								1.5e-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-1700 (Mitchell Branch)								
U-234	4	7.8e+00	3.4e+00	5.7e+00	5.6e+00	5.0e+02	1.1e+00	1.1e-02
U-235	4	1.2e+00	<3.7e-01	4.9e-01	6.3e-01	6.0e+02	1.0e-01	1.0e-03
U-238	4	4.4e+00	2.1e+00	3.2e+00	3.2e+00	6.0e+02	5.4e-01	5.4e-03
Gross Alpha	4	6.2e+00	4.8e+00	5.1e+00	5.3e+00	*b*	*b*	*b*
Gross Beta	4	9.6e+00	5.2e+00	8.2e+00	7.8e+00	*b*	*b*	*b*
All listed Isotopes								1.8e-02

[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]			
				K-1710				
U-234	2	1.2e+00	9.1e-01	1.1e+00	1.1e+00	5.0e+02	2.1e-01	2.1e-03
U-235	2	3.1e-01	<6.1e-02	1.9e-01	1.9e-01	6.0e+02	3.1e-02	3.1e-04
U-238	2	6.5e-01	6.2e-01	6.4e-01	6.4e-01	6.0e+02	1.1e-01	1.1e-03
Alpha activity	2	1.5e+00	<1.8e-00	1.6e+00	1.6e+00	*b*	*b*	*b*
Beta activity	2	4.1e+00	<1.8e+00	2.9e+00	2.9e+00	*b*	*b*	*b*
All listed Isotopes								3.5e-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]			
				MIK 1.4				
U-234	4	1.7e+00	<3.7e-01	1.1e-00	7.3e-01	5.0e+02	1.5e-01	1.5e-03
U-235	4	1.7e+00	<-1.4e-01	3.8e-01	3.8e-01	6.0e+02	6.3e-02	6.3e-04
U-238	4	<9.4e-01	<-1.8e-02	6.7e-01	3.4e-01	6.0e+02	5.7e-02	5.7e-04
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.

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]			
K-700 Slough								
Beta Activity	1	4.8e+00	4.8e+00	4.8e+00	4.8e+00	*b*	*b*	*b*

[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. 2005 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		
Calcium (mg/L)	2/2	43	40	42		
Dissolved oxygen (mg/L)	2/2	8.7	8.5	8.6	5.0 min	0
Magnesium (mg/L)	2/2	12	11	12		
Manganese (mg/L)	2/2	0.040	0.038	0.039		
pH (standard units)	2/2	7.8	7.4	7.6	6.5-8.5	0
Potassium (mg/L)	2/2	1.9	1.9	1.9		
Sodium (mg/L)	2/2	6.2	5.8	6.0		
Temperature (C^o)	2/2	20	15	17		
Zinc (mg/L)	2/2	0.012	0.0066	0.0093	0.12	0

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

Table 1.12. 2005 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		
Calcium (mg/L)	1/1	43	43	43		
Dissolved oxygen (mg/L)	1/1	9.4	9.4	9.4	5.0 min	0
Magnesium (mg/L)	1/1	11	11	11		
Manganese (mg/L)	1/1	0.044	0.044	0.044		
pH (standard units)	1/1	7.4	7.4	7.4	6.5-8.5	0
Potassium (mg/L)	1/1	1.8	1.8	1.8		
Sodium (mg/L)	1/1	6.1	6.1	6.1		
Temperature (C^o)	1/1	14	14	14		

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

Table 1.13. 2005 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	8.2	5.7	7.0	5.0 min	0
pH (standard units)	2/2	7.4	7.3	7.4	6.5 - 8.5	0
Temperature (C^o)	2/2	22	16	19		

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

Table 1.14. 2005 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		
Barium	2/2	0.051	0.037	0.044		
Calcium (mg/L)	2/2	36	36	36		
Dissolved Oxygen (mg/L)	2/2	7.5	4.5	6.0	5.0 min	1
Iron (mg/L)	2/2	0.55	0.2	0.38		
Magnesium (mg/L)	2/2	12	10	11		
Manganese (mg/L)	2/2	0.12	0.018	0.069		
pH (standard units)	2/2	7.9	7.3	7.6	6.5-8.5	0
Potassium (mg/L)	2/2	1.4	1.3	1.4		
Selenium (mg/L)	1/2	0.0051	0.0034	0.0043		
Sodium (mg/L)	2/2	1.4	0.76	1.1		
Temperature (C^o)	2/2	19	14	17		
Zinc (mg/L)	2/2	0.006	0.0094	0.008	0.12	0

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

Table 1.15. 2005 ETTP parameters detected at K-1007-B

Parameter	Number detected/ number of samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
Aluminum (mg/L)	2/2	0.25	0.12	0.19		
Calcium (mg/L)	2/2	40	36	38		
Dissolved Oxygen (mg/L)	2/2	7.6	5.3	6.5	5.0 min	0
Iron (mg/L)	2/2	0.34	0.23	0.29		
Magnesium (mg/L)	2/2	12	10	11		
Manganese (mg/L)	2/2	0.11	0.097	0.10		
pH (standard units)	2/2	8.0	7.7	7.9	6.5 - 8.5	0
Potassium (mg/L)	2/2	2.7	2.3	2.5		
Sodium	2/2	4.3	2.8	3.6		
Temperature (C^o)	3/3	23	14	19		
Zinc (mg/L)	2/2	0.012	0.0079	0.01	0.12	0

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

Table 1.16. 2005 ETTP parameters detected at K-1700

Parameter	Number detected/ number of Samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
1,1-Dichloroethane (mg/L)	4/4	0.0016	0.00055	0.0011		
1,2 Dichloroethane	2/4	0.0011	0.00055	0.0012		0
Barium (mg/L)	4/4	0.063	0.035	0.051		
Calcium (mg/L)	4/4	76	39	61		
Carbon tetrachloride	3/4	0.0014	<0.00041	0.0011		
Chloroform (mg/L)	4/4	0.0038	0.0024	0.003	4.7	0
cis-1,2 Dichloroethene (mg/L)	4/4	0.058	0.015	0.041		
Dissolved Oxygen (mg/L)	4.4	11	4.2	7.7	5.0 min	1
Iron (mg/L)	4/4	0.24	0.22	0.23		
Magnesium (mg/L)	4/4	13	9.1	12		
Manganese (mg/L)	4/4	0.28	0.082	0.17		
Nickel (mg/Kg)	4/4	0.012	0.0046	0.0081	1.4	0
Potassium (mg/L)	4/4	3.0	1.6	2.5		
Sodium (mg/L)	4/4	9.2	3.1	6.5		
Temperature (C°)	4/4	22	9.3	15		
Trichloroethene (mg/L)	4/4	0.068	0.017	0.045	0.810	0
Vinyl Chloride (mg/L)	4/4	0.0056	0.0024	0.0041	5.3	
pH (standard units)	4/4	7.4	6.7	7.1	6.5 - 8.5	0
Zinc (mg/L)	4/4	0.017	0.0066	0.0011	0.12	0

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

Table 1.17. 2005 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	8.5	6.5	7.5	5.0 min	0
pH (standard units)	2/2	7.2	7.2	7.2	6.5 - 8.5	0
Temperature (C^o)	2/2	19	11	15		

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

Table 1.18 2005 ETTP parameters detected at MIK 1.4

Parameter	Number detected/ number of Samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
Aluminum (mg/L)	4/4	0.13	0.05	0.06		
Barium (mg/L0	4/4	0.056	0.032	0.047		
Calcium (mg/L)	4/4	23	9.7	18		
Dissolved Oxygen (mg/L)	4/4	9.3	8.4	8.9	5.0 min.	0
Iron (mg/L)	4/4	0.44	0.2	0.37		
Magnesium (mg/L)	4/4	13	5.0	10		
Manganese (mg/L)	4/4	0.25	0.1	0.17		
Nickel (mg/L)	3/4	0.0019	0.0013	0.0015	1.4	0
pH (standard units)	4/4	7.4	6.5	7.3	6.5 - 8.5	0
Potassium (mg/L)	4/4	1.3	0.88	1.1		
Sodium (mg/L)	4/4	0.81	0.64	0.73		
Temperature (C^o)	4/4	22	9.8	14		
Zinc (mg/L)	4/4	0.021	0.0041	0.01	0.12	0

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

Table 1.19. 2005 ETTP parameters detected at K-700 Slough

Parameter	Number detected/ number of samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
Aluminum (mg/L)	1/1	0.18	0.18	0.18		
Calcium (mg/L)	1/1	39	39	39		
Dissolved Oxygen (mg/L)	1/1	8.0	8.0	8.0	5.0 min	0
Iron (mg/L)	1/1	0.37	0.37	0.37		
Magnesium (mg/L)	1/1	8.3	8.3	8.3		
Manganese (mg/L)	1/1	0.26	0.26	0.26		
pH (standard units)	1/1	8.0	8.0	8.0	6.5 - 8.5	0
Potassium (mg/L)	1/1	3.4	3.4	3.4		
Sodium (mg/L)	1/1	3.9	3.9	3.9		
Temperature (C^o)	1/1	21	21	21		
Zinc (mg/L)	1/1	0.009	0.009	0.009	0.12	0

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

2. Oak Ridge National Laboratory

Table 2.1. Major sources of radiological airborne emissions at ORNL, 2005 (Ci)[a]

Isotope	Stack				
	X-2026	X-3020	X-3039	X-7503	X-7911
^{110m}Ag	8.95E-08		8.07E-07		
^{241}Am	8.66E-08	2.72E-07	4.31E-06	2.48E-09	2.86E-08
$^{242/243}$Am	4.63E-09	1.13E-08	2.24E-08	1.44E-09	
^{41}Ar					2.10E+03
^{139}Ba					3.47E-01
^{140}Ba	5.31E-06				1.67E-04
^{7}Be	1.16E-06	7.89E-08	1.14E-05	3.91E-08	1.17E-07
^{214}Bi			2.99E-07		
^{141}Ce					8.60E-07
^{252}Cf					3.17E-09
$^{243/244}$Cm	9.59E-07	1.94E-08	6.36E-08	1.38E-08	1.02E-07
$^{245/246}$Cm	1.16E-08	4.62E-09	2.16E-08	8.49E-10	1.19E-08
^{57}Co			7.73E-07		
^{58}Co					9.49E-08
^{60}Co			3.56E-06		
^{51}Cr				6.72E-07	
^{137}Cs	2.86E-06	2.59E-06	1.10E-04	4.04E-08	4.72E-06
^{138}Cs					1.20E+03
^{152}Eu			1.12E-06		
^{154}Eu				4.16E-08	
^{155}Eu	1.22E-07				
^{59}Fe			7.87E-07		
^{3}H	3.07E+00		2.64E+01	1.65E+00	4.00E+01
^{203}Hg	1.25E-07		2.16E-06		
^{131}I			1.90E-06		4.20E-02
^{132}I					6.11E-01
^{133}I			1.41E-05		2.39E-01
^{134}I					2.74E-01
^{135}I					8.04E-01
^{40}K				2.46E-07	
^{85}Kr					2.21E+03
^{85m}Kr					6.22E-03
^{87}Kr					9.47E+01
^{88}Kr					4.97E+01
^{89}Kr					3.01E+01
^{140}La					1.57E-04
^{22}Na				1.55E-08	
^{95}Nb			3.67E-07		
^{191}Os			1.02E-01		
^{212}Pb	4.92E-01	1.25E-07	1.03E+00	2.93E-01	6.53E-02
^{214}Pb		1.09E-07		4.19E-08	
^{146}Pm					1.51E-07
^{238}Pu	3.68E-08	2.22E-08	3.80E-09	5.05E-10	3.24E-09

Table 2.1 (continued)

Isotope	Stack				
	X-2026	X-3020	X-3039	X-7503	X-7911
$^{239/240}$Pu	1.10E-07	1.71E-07	9.94E-07	9.19E-09	6.21E-08
^{244}Pu		5.23E-09	2.36E-08		1.18E-08
^{106}Ru		4.37E-07			6.03E-05
^{75}Se			3.56E-03		
$^{89/90}$Sr	3.78E-07	1.22E-06	4.96E-05	6.60E-09	6.68E-06
^{228}Th	2.73E-08	1.44E-08	2.18E-08	1.27E-09	6.12E-09
^{230}Th	6.50E-09	8.73E-09	3.01E-08	4.40E-09	2.18E-08
^{232}Th	1.80E-10	4.29E-09	1.45E-08	5.81E-10	5.53E-09
^{234}Th	2.66E-06				
^{208}Tl	7.32E-08				
^{234}U	1.07E-07	1.49E-07	1.14E-07	1.23E-08	9.22E-08
^{235}U	3.13E-09	9.23E-09	3.42E-08	5.93E-10	3.10E-08
^{238}U	3.66E-09	3.04E-08	8.14E-08	2.41E-09	1.32E-08
^{131M}Xe					4.93E-05
^{133}Xe					5.64E-03
^{133M}Xe					3.15E+00
^{135}Xe					3.58E+01
^{135M}Xe					2.35E+01
^{137}Xe					1.01E+02
^{138}Xe					1.27E+02
^{90}Y	3.78E-07	1.22E-06	4.96E-05	6.60E-09	6.68E-06
^{95}Zr	1.10E-07				

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

Table 2.2. Constituents Detected in Exit Pathway Groundwater at ORNL, 2005 (a)

Parameter	N det/ N total	Measured values			Reference value	Number of values exceeding reference [ref] (d)
		Min(b)	Max(b)	Av(c)		
BC-01 - Seep/spring located on the northernmost unnamed tributary to Bearden Creek						
Field measurements						
Conductivity (mS/cm)	1/1	0.18	0.18	n/a	n/a	n/a
Dissolved Oxygen (ppm)	1/1	6.0	6.0	n/a	n/a	n/a
pH (Std Unit)	1/1	7.0	7.0	n/a	n/a	n/a
Temperature (deg C)	1/1	22	22	n/a	30.5	0[1]
Turbidity (NTU)	1/1	15	15	n/a	1	1[2]
Metals (mg/L)						
Aluminum	1/1	0.16	0.16	n/a	(0.05, 0.2)	0[3]
Antimony	1/1	0.00058	0.00058	n/a	0.006	0[1]
Barium	1/1	0.029	0.029	n/a	2	0[1]
Boron	1/1	0.016	0.016	n/a	n/a	n/a
Calcium	1/1	23	23	n/a	n/a	n/a
Cobalt	1/1	0.00041	0.00041	n/a	n/a	n/a
Copper	1/1	0.00074	0.00074	n/a	1.3	0[2]
Iron	1/1	0.22	0.22	n/a	0.3	0[3]
Magnesium	1/1	4.3	4.3	n/a	n/a	n/a
Manganese	1/1	0.027	0.027	n/a	0.05	0[3]
Nickel	1/1	0.00068	0.00068	n/a	0.1	0[1]
Potassium	1/1	3.0	3.0	n/a	n/a	n/a
Silicon	1/1	5.6	5.6	n/a	n/a	n/a
Sodium	1/1	1.4	1.4	n/a	n/a	n/a
Strontium	1/1	0.039	0.039	n/a	n/a	n/a
Sulfur	1/1	1.9	1.9	n/a	n/a	n/a
Titanium	1/1	0.0041	0.0041	n/a	n/a	n/a
Uranium	1/1	0.000065	0.000065	n/a	n/a	n/a
Vanadium	1/1	0.003	0.003	n/a	n/a	n/a
Zinc	1/1	0.008	0.008	n/a	5	0[3]
Zirconium	1/1	0.00073	0.00073	n/a	n/a	n/a
Radionuclides (pCi/L) (e)						
Tritium	1/1	360*	360*	n/a	20,000	0[2]
EE-01 - Surface water monitoring point located east of the Experimental Gas Cooled Reactor Facility						
Field measurements						
Conductivity (mS/cm)	1/1	0.37	0.37	n/a	n/a	n/a
Dissolved Oxygen (ppm)	1/1	4.7	4.7	n/a	n/a	n/a
pH (Std Unit)	1/1	7.5	7.5	n/a	n/a	n/a
Temperature (deg C)	1/1	23	23	n/a	30.5	0[1]
Turbidity (NTU)	1/1	25	25	n/a	1	1[2]
Metals (mg/L)						
Aluminum	1/1	0.35	0.35	n/a	(0.05, 0.2)	1[3]
Barium	1/1	0.059	0.059	n/a	2	0[1]
Boron	1/1	0.03	0.03	n/a	n/a	n/a
Calcium	1/1	52	52	n/a	n/a	n/a
Cobalt	1/1	0.00035	0.00035	n/a	n/a	n/a
Copper	1/1	0.00095	0.00095	n/a	1.3	0[2]
Iron	1/1	0.4	0.4	n/a	0.3	1[3]
Magnesium	1/1	9.6	9.6	n/a	n/a	n/a
Manganese	1/1	0.015	0.015	n/a	0.05	0[3]
Molybdenum	1/1	0.001	0.001	n/a	n/a	n/a

Table 2.2 (continued)

Parameter	N det/ N total	Measured values			Reference value	Number of values exceeding reference [ref] (d)
		Min(b)	Max(b)	Av(c)		
Nickel	1/1	0.0013	0.0013	n/a	0.1	0[1]
Potassium	1/1	1.9	1.9	n/a	n/a	n/a
Silicon	1/1	4.2	4.2	n/a	n/a	n/a
Sodium	1/1	5.5	5.5	n/a	n/a	n/a
Strontium	1/1	0.12	0.12	n/a	n/a	n/a
Sulfur	1/1	8.3	8.3	n/a	n/a	n/a
Titanium	1/1	0.0083	0.0083	n/a	n/a	n/a
Uranium	1/1	0.00031	0.00031	n/a	n/a	n/a
Vanadium	1/1	0.003	0.003	n/a	n/a	n/a
Zinc	1/1	0.0059	0.0059	n/a	5	0[3]
Radionuclides (pCi/L) (e)						
Tritium	1/1	240*	240*	n/a	20,000	0[2]
S-02 - Surface water monitoring point located downstream of the Tower Shielding Facility						
Field measurements						
Conductivity (mS/cm)	1/1	0.28	0.28	n/a	n/a	n/a
Dissolved Oxygen (ppm)	1/1	7.2	7.2	n/a	n/a	n/a
pH (Std Unit)	1/1	8.1	8.1	n/a	n/a	n/a
Temperature (deg C)	1/1	19	19	n/a	30.5	0[1]
Turbidity (NTU)	1/1	68	68	n/a	1	1[2]
Metals (mg/L)						
Aluminum	1/1	0.16	0.16	n/a	(0.05, 0.2)	0[3]
Barium	1/1	0.041	0.041	n/a	2	0[1]
Boron	1/1	0.015	0.015	n/a	n/a	n/a
Cadmium	1/1	0.00012	0.00012	n/a	0.005	0[1]
Calcium	1/1	29	29	n/a	n/a	n/a
Cobalt	1/1	0.00071	0.00071	n/a	n/a	n/a
Copper	1/1	0.00092	0.00092	n/a	1.3	0[2]
Iron	1/1	0.19	0.19	n/a	0.3	0[3]
Lead	1/1	0.0018	0.0018	n/a	0.005	0[1]
Magnesium	1/1	16	16	n/a	n/a	n/a
Manganese	1/1	0.084	0.084	n/a	0.05	1[3]
Nickel	1/1	0.001	0.001	n/a	0.1	0[1]
Potassium	1/1	0.88	0.88	n/a	n/a	n/a
Selenium	1/1	0.0031	0.0031	n/a	0.05	0[1]
Silicon	1/1	7.1	7.1	n/a	n/a	n/a
Sodium	1/1	0.71	0.71	n/a	n/a	n/a
Strontium	1/1	0.018	0.018	n/a	n/a	n/a
Sulfur	1/1	0.59	0.59	n/a	n/a	n/a
Titanium	1/1	0.0029	0.0029	n/a	n/a	n/a
Uranium	1/1	0.00024	0.00024	n/a	n/a	n/a
Vanadium	1/1	0.0045	0.0045	n/a	n/a	n/a
Zinc	1/1	0.012	0.012	n/a	5	0[3]
Well 1190						
Field measurements						
Conductivity (mS/cm)	1/1	0.75	0.75	n/a	n/a	n/a
Dissolved Oxygen (ppm)	1/1	1.6	1.6	n/a	n/a	n/a
pH (Std Unit)	1/1	6.8	6.8	n/a	n/a	n/a
RedOx (mV)	1/1	-270	-270	n/a	n/a	n/a
Temperature (deg C)	1/1	18	18	n/a	30.5	0[1]
Turbidity (NTU)	1/1	1.0	1.0	n/a	1	0[2]

Table 2.2 (continued)

Parameter	N det/ N total	Measured values			Reference value	Number of values exceeding reference [ref] (d)
		Min(b)	Max(b)	Av(c)		
Metals (mg/L)						
Barium	1/1	0.73	0.73	n/a	2	0[1]
Boron	1/1	0.036	0.036	n/a	n/a	n/a
Calcium	1/1	150	150	n/a	n/a	n/a
Cobalt	1/1	0.00048	0.00048	n/a	n/a	n/a
Copper	1/1	0.00072	0.00072	n/a	1.3	0[2]
Iron	1/1	0.86	0.86	n/a	0.3	1[3]
Lithium	1/1	0.023	0.023	n/a	n/a	n/a
Magnesium	1/1	17	17	n/a	n/a	n/a
Manganese	1/1	0.078	0.078	n/a	0.05	1[3]
Molybdenum	1/1	0.00012	0.00012	n/a	n/a	n/a
Nickel	1/1	0.0077	0.0077	n/a	0.1	0[1]
Potassium	1/1	1.8	1.8	n/a	n/a	n/a
Silicon	1/1	8.6	8.6	n/a	n/a	n/a
Sodium	1/1	13	13	n/a	n/a	n/a
Strontium	1/1	0.46	0.46	n/a	n/a	n/a
Sulfur	1/1	0.38	0.38	n/a	n/a	n/a
Titanium	1/1	0.0031	0.0031	n/a	n/a	n/a
Uranium	1/1	0.00035	0.00035	n/a	n/a	n/a
Zinc	1/1	0.0038	0.0038	n/a	5	0[3]
Zirconium	1/1	0.001	0.001	n/a	n/a	n/a
Radionuclides (pCi/L) (e)						
Tritium	1/1	27,000*	27,000*	n/a	20,000	1[2]
Volatile organics (ug/L)						
Carbon disulfide	1/1	J2.8	J2.8	n/a	n/a	n/a
		Well 1191				
Field measurements						
Conductivity (mS/cm)	1/1	0.52	0.52	n/a	n/a	n/a
Dissolved Oxygen (ppm)	1/1	1.7	1.7	n/a	n/a	n/a
pH (Std Unit)	1/1	7.2	7.2	n/a	n/a	n/a
RedOx (mV)	1/1	-250	-250	n/a	n/a	n/a
Temperature (deg C)	1/1	18	18	n/a	30.5	0[1]
Turbidity (NTU)	1/1	0.0	0.0	n/a	1	0[2]
Metals (mg/L)						
Aluminum	1/1	0.0088	0.0088	n/a	(0.05, 0.2)	1[3]
Barium	1/1	0.13	0.13	n/a	2	0[1]
Boron	1/1	0.021	0.021	n/a	n/a	n/a
Calcium	1/1	72	72	n/a	n/a	n/a
Cobalt	1/1	0.001	0.001	n/a	n/a	n/a
Copper	1/1	0.00087	0.00087	n/a	1.3	0[2]
Iron	1/1	2.4	2.4	n/a	0.3	1[3]
Magnesium	1/1	17	17	n/a	n/a	n/a
Manganese	1/1	0.29	0.29	n/a	0.05	1[3]
Molybdenum	1/1	0.00067	0.00067	n/a	n/a	n/a
Nickel	1/1	0.042	0.042	n/a	0.1	0[1]
Phosphorous	1/1	0.037	0.037	n/a	n/a	n/a
Potassium	1/1	3.3	3.3	n/a	n/a	n/a
Silicon	1/1	3.0	3.0	n/a	n/a	n/a
Silver	1/1	0.00025	0.00025	n/a	0.1	0[3]
Sodium	1/1	12	12	n/a	n/a	n/a
Strontium	1/1	0.14	0.14	n/a	n/a	n/a

Table 2.2 (continued)

Parameter	N det/ N total	Measured values			Reference value	Number of values exceeding reference [ref] (d)
		Min(b)	Max(b)	Av(c)		
Sulfur	1/1	2.2	2.2	n/a	n/a	n/a
Titanium	1/1	0.0029	0.0029	n/a	n/a	n/a
Uranium	1/1	0.0018	0.0018	n/a	n/a	n/a
Zinc	1/1	0.0033	0.0033	n/a	5	0[3]
Zirconium	1/1	0.00056	0.00056	n/a	n/a	n/a
Radionuclides (pCi/L) (e)						
Beta activity	1/1	300*	300*	n/a	50	1[2]
Strontium-89/90	1/1	150*	150*	n/a	40	1[4]
Tritium	1/1	36,000*	36,000*	n/a	20,000	1[2]
Volatile organics (ug/L)						
Carbon disulfide	1/1	J1.8	J1.8	n/a	n/a	n/a
		Well 1198				
Field measurements						
Conductivity (mS/cm)	1/1	0.62	0.62	n/a	n/a	n/a
Dissolved Oxygen (ppm)	1/1	1.7	1.7	n/a	n/a	n/a
pH (Std Unit)	1/1	6.6	6.6	n/a	n/a	n/a
RedOx (mV)	1/1	-190	-190	n/a	n/a	n/a
Temperature (deg C)	1/1	16	16	n/a	30.5	0[1]
Turbidity (NTU)	1/1	4.0	4.0	n/a	1	1[2]
Metals (mg/L)						
Aluminum	1/1	0.4	0.4	n/a	(0.05, 0.2)	1[3]
Barium	1/1	0.031	0.031	n/a	2	0[1]
Boron	1/1	0.011	0.011	n/a	n/a	n/a
Calcium	1/1	140	140	n/a	n/a	n/a
Chromium	1/1	0.0024	0.0024	n/a	1	0[1]
Cobalt	1/1	0.00042	0.00042	n/a	n/a	n/a
Copper	1/1	0.0011	0.0011	n/a	1.3	0[2]
Iron	1/1	1.1	1.1	n/a	0.3	1[3]
Lithium	1/1	0.0023	0.0023	n/a	n/a	n/a
Magnesium	1/1	5.2	5.2	n/a	n/a	n/a
Manganese	1/1	0.0076	0.0076	n/a	0.05	0[3]
Molybdenum	1/1	0.00016	0.00016	n/a	n/a	n/a
Nickel	1/1	0.0064	0.0064	n/a	0.1	0[1]
Potassium	1/1	1.2	1.2	n/a	n/a	n/a
Silicon	1/1	5.1	5.1	n/a	n/a	n/a
Silver	1/1	0.00092	0.00092	n/a	0.1	0[3]
Sodium	1/1	3.2	3.2	n/a	n/a	n/a
Strontium	1/1	0.18	0.18	n/a	n/a	n/a
Sulfur	1/1	3.4	3.4	n/a	n/a	n/a
Titanium	1/1	0.0059	0.0059	n/a	n/a	n/a
Uranium	1/1	0.00031	0.00031	n/a	n/a	n/a
Zinc	1/1	0.0042	0.0042	n/a	5	0[3]
Radionuclides (pCi/L) (e)						
Tritium	1/1	870*	870*	n/a	20,000	0[2]
		Well 1199				
Field measurements						
Conductivity (mS/cm)	1/1	0.39	0.39	n/a	n/a	n/a
Dissolved Oxygen (ppm)	1/1	1.6	1.6	n/a	n/a	n/a
pH (Std Unit)	1/1	8.3	8.3	n/a	n/a	n/a
RedOx (mV)	1/1	-320	-320	n/a	n/a	n/a
Temperature (deg C)	1/1	19	19	n/a	30.5	0[1]

Table 2.2 (continued)

Parameter	N det/ N total	Measured values			Reference value	Number of values exceeding reference [ref] (d)
		Min(b)	Max(b)	Av(c)		
Turbidity (NTU)	1/1	12	12	n/a	1	1[2]
Metals (mg/L)						
Aluminum	1/1	0.0091	0.0091	n/a	(0.05, 0.2)	1[3]
Barium	1/1	0.068	0.068	n/a	2	0[1]
Boron	1/1	0.31	0.31	n/a	n/a	n/a
Calcium	1/1	17	17	n/a	n/a	n/a
Cobalt	1/1	0.00027	0.00027	n/a	n/a	n/a
Copper	1/1	0.00048	0.00048	n/a	1.3	0[2]
Iron	1/1	0.1	0.1	n/a	0.3	0[3]
Lithium	1/1	0.011	0.011	n/a	n/a	n/a
Magnesium	1/1	36	36	n/a	n/a	n/a
Potassium	1/1	4.0	4.0	n/a	n/a	n/a
Silicon	1/1	8.3	8.3	n/a	n/a	n/a
Sodium	1/1	6.8	6.8	n/a	n/a	n/a
Strontium	1/1	2.5	2.5	n/a	n/a	n/a
Sulfur	1/1	2.0	2.0	n/a	n/a	n/a
Titanium	1/1	0.003	0.003	n/a	n/a	n/a
Zinc	1/1	0.0044	0.0044	n/a	5	0[3]
Radionuclides (pCi/L) (e)						
Tritium	1/1	2,500*	2,500*	n/a	20,000	0[2]
Volatile organics (ug/L)						
Carbon disulfide	1/1	J4.5	J4.5	n/a	n/a	n/a
		Well 1239				
Field measurements						
Conductivity (mS/cm)	1/1	0.81	0.81	n/a	n/a	n/a
Dissolved Oxygen (ppm)	1/1	2.3	2.3	n/a	n/a	n/a
pH (Std Unit)	1/1	9.3	9.3	n/a	n/a	n/a
RedOx (mV)	1/1	-220	-220	n/a	n/a	n/a
Temperature (deg C)	1/1	16	16	n/a	30.5	0[1]
Turbidity (NTU)	1/1	15	15	n/a	1	1[2]
Metals (mg/L)						
Aluminum	1/1	0.36	0.36	n/a	(0.05, 0.2)	1[3]
Arsenic	1/1	0.0029	0.0029	n/a	0.01	0[1]
Barium	1/1	0.057	0.057	n/a	2	0[1]
Boron	1/1	0.81	0.81	n/a	n/a	n/a
Calcium	1/1	0.74	0.74	n/a	n/a	n/a
Copper	1/1	0.0026	0.0026	n/a	1.3	0[2]
Iron	1/1	0.19	0.19	n/a	0.3	0[3]
Lithium	1/1	0.039	0.039	n/a	n/a	n/a
Magnesium	1/1	0.23	0.23	n/a	n/a	n/a
Manganese	1/1	0.003	0.003	n/a	0.05	0[3]
Molybdenum	1/1	0.0028	0.0028	n/a	n/a	n/a
Nickel	1/1	0.00067	0.00067	n/a	0.1	0[1]
Phosphorous	1/1	0.06	0.06	n/a	n/a	n/a
Potassium	1/1	1.6	1.6	n/a	n/a	n/a
Silicon	1/1	5.4	5.4	n/a	n/a	n/a
Sodium	1/1	220	220	n/a	n/a	n/a
Strontium	1/1	0.055	0.055	n/a	n/a	n/a
Sulfur	1/1	12	12	n/a	n/a	n/a
Thorium	1/1	0.00038	0.00038	n/a	n/a	n/a
Titanium	1/1	0.012	0.012	n/a	n/a	n/a

Table 2.2 (continued)

Parameter	N det/ N total	Measured values			Reference value	Number of values exceeding reference [ref] (d)
		Min(b)	Max(b)	Av(c)		
Uranium	1/1	0.0017	0.0017	n/a	n/a	n/a
Zinc	1/1	0.0079	0.0079	n/a	5	0[3]
Zirconium	1/1	0.002	0.002	n/a	n/a	n/a
Well 531 - West of the main campus of ORNL, between First Creek and Highway 95						
Field measurements						
Conductivity (mS/cm)	3/3	0.71	0.85	0.8	n/a	n/a
Dissolved Oxygen (ppm)	3/3	1.3	1.3	1.3	n/a	n/a
pH (Std Unit)	3/3	7.9	8.6	n/a	n/a	n/a
RedOx (mV)	3/3	-290	-210	~-240	n/a	n/a
Temperature (deg C)	3/3	19	20	20	30.5	0[1]
Turbidity (NTU)	3/3	0.4	1,000	410	1	2[2]
Metals (mg/L)						
Aluminum	1/1	1.1	1.1	n/a	(0.05, 0.2)	1[3]
Barium	1/1	0.23	0.23	n/a	2	0[1]
Boron	1/1	E0.48	E0.48	n/a	n/a	n/a
Calcium	1/1	23	23	n/a	n/a	n/a
Chromium	1/1	0.0024	0.0024	n/a	1	0[1]
Cobalt	1/1	0.00038	0.00038	n/a	n/a	n/a
Copper	1/1	0.0012	0.0012	n/a	1.3	0[2]
Iron	1/1	0.98	0.98	n/a	0.3	1[3]
Lead	1/1	0.00086	0.00086	n/a	0.005	0[1]
Lithium	1/1	0.1	0.1	n/a	n/a	n/a
Magnesium	1/1	11	11	n/a	n/a	n/a
Manganese	1/1	0.027	0.027	n/a	0.05	0[3]
Molybdenum	1/1	0.0002	0.0002	n/a	n/a	n/a
Nickel	1/1	0.0018	0.0018	n/a	0.1	0[1]
Phosphorous	1/1	0.021	0.021	n/a	n/a	n/a
Potassium	1/1	3.3	3.3	n/a	n/a	n/a
Silicon	1/1	9.2	9.2	n/a	n/a	n/a
Sodium	1/1	130	130	n/a	n/a	n/a
Strontium	1/1	1.1	1.1	n/a	n/a	n/a
Sulfur	1/1	E3.1	E3.1	n/a	n/a	n/a
Thallium	1/1	0.00045	0.00045	n/a	0.002	0[1]
Titanium	1/1	0.018	0.018	n/a	n/a	n/a
Zinc	1/1	0.027	0.027	n/a	5	0[3]
Zirconium	1/1	0.0015	0.0015	n/a	n/a	n/a
Semivolatile organics (ug/L)						
Diethyl phthalate	1/1	J3.0	J3.0	n/a	n/a	n/a
Volatile organics (ug/L)						
Acetone	1/1	J3.1	J3.1	n/a	n/a	n/a
Benzene	1/1	J0.44	J0.44	n/a	5	0[1]
Toluene	1/1	B1.8	B1.8	n/a	1,000	0[1]
Total Xylene	1/1	J0.57	J0.57	n/a	10,000	0[1]
Well 535 - West of the main campus of ORNL, between First Creek and Highway 95						
Field measurements						
Conductivity (mS/cm)	1/1	0.65	0.65	n/a	n/a	n/a
Dissolved Oxygen (ppm)	1/1	0.32	0.32	n/a	n/a	n/a
pH (Std Unit)	1/1	6.8	6.8	n/a	n/a	n/a
RedOx (mV)	1/1	-170	-170	n/a	n/a	n/a
Temperature (deg C)	1/1	24	24	n/a	30.5	0[1]
Metals (mg/L)						

Table 2.2 (continued)

Parameter	N det/ N total	Measured values			Reference value	Number of values exceeding reference [ref] (d)
		Min(b)	Max(b)	Av(c)		
Aluminum	1/1	0.27	0.27	n/a	(0.05, 0.2)	1[3]
Barium	1/1	0.056	0.056	n/a	2	0[1]
Boron	1/1	0.024	0.024	n/a	n/a	n/a
Cadmium	1/1	0.00018	0.00018	n/a	0.005	0[1]
Calcium	1/1	120	120	n/a	n/a	n/a
Chromium	1/1	0.0044	0.0044	n/a	1	0[1]
Cobalt	1/1	0.00092	0.00092	n/a	n/a	n/a
Copper	1/1	0.0027	0.0027	n/a	1.3	0[2]
Iron	1/1	2.2	2.2	n/a	0.3	1[3]
Lead	1/1	0.00087	0.00087	n/a	0.005	0[1]
Lithium	1/1	0.0034	0.0034	n/a	n/a	n/a
Magnesium	1/1	8.5	8.5	n/a	n/a	n/a
Manganese	1/1	0.8	0.8	n/a	0.05	1[3]
Molybdenum	1/1	0.00024	0.00024	n/a	n/a	n/a
Nickel	1/1	0.0036	0.0036	n/a	0.1	0[1]
Potassium	1/1	1.3	1.3	n/a	n/a	n/a
Silicon	1/1	6.6	6.6	n/a	n/a	n/a
Sodium	1/1	5.1	5.1	n/a	n/a	n/a
Strontium	1/1	0.35	0.35	n/a	n/a	n/a
Sulfur	1/1	0.39	0.39	n/a	n/a	n/a
Thallium	1/1	0.00041	0.00041	n/a	0.002	0[1]
Titanium	1/1	0.0056	0.0056	n/a	n/a	n/a
Uranium	1/1	0.00015	0.00015	n/a	n/a	n/a
Vanadium	1/1	0.0024	0.0024	n/a	n/a	n/a
Zinc	1/1	0.021	0.021	n/a	5	0[3]
Zirconium	1/1	0.0005	0.0005	n/a	n/a	n/a
Radionuclides (pCi/L) (e)						
Tritium	1/1	760*	760*	n/a	20,000	0[2]
Semi-volatile organics (ug/L)						
Diethyl phthalate	1/1	J3.3	J3.3	n/a	n/a	n/a
Volatile organics (ug/L)						
Benzene	1/1	J0.37	J0.37	n/a	5	0[1]
Methylene chloride	1/1	JB3.6	JB3.6	n/a	5	0[1]
Toluene	1/1	J0.59	J0.59	n/a	1,000	0[1]
		Well 857				
Field measurements						
Conductivity (mS/cm)	1/1	0.01	0.01	n/a	n/a	n/a
Dissolved Oxygen (ppm)	1/1	7.2	7.2	n/a	n/a	n/a
pH (Std Unit)	1/1	5.1	5.1	n/a	n/a	n/a
RedOx (mV)	1/1	0.53	0.53	n/a	n/a	n/a
Temperature (deg C)	1/1	21	21	n/a	30.5	0[1]
Turbidity (NTU)	1/1	0.0	0.0	n/a	1	0[2]
Metals (mg/L)						
Aluminum	1/1	0.79	0.79	n/a	(0.05, 0.2)	1[3]
Barium	1/1	0.012	0.012	n/a	2	0[1]
Boron	1/1	0.0072	0.0072	n/a	n/a	n/a
Calcium	1/1	0.35	0.35	n/a	n/a	n/a
Chromium	1/1	0.017	0.017	n/a	1	0[1]
Cobalt	1/1	0.0005	0.0005	n/a	n/a	n/a
Copper	1/1	0.0012	0.0012	n/a	1.3	0[2]
Iron	1/1	0.64	0.64	n/a	0.3	1[3]

Table 2.2 (continued)

Parameter	N det/ N total	Measured values			Reference value	Number of values exceeding reference [ref] (d)
		Min(b)	Max(b)	Av(c)		
Lead	1/1	0.0041	0.0041	n/a	0.005	0[1]
Magnesium	1/1	1.0	1.0	n/a	n/a	n/a
Manganese	1/1	0.024	0.024	n/a	0.05	0[3]
Molybdenum	1/1	0.00023	0.00023	n/a	n/a	n/a
Nickel	1/1	0.0064	0.0064	n/a	0.1	0[1]
Potassium	1/1	0.57	0.57	n/a	n/a	n/a
Silicon	1/1	5.4	5.4	n/a	n/a	n/a
Sodium	1/1	0.45	0.45	n/a	n/a	n/a
Strontium	1/1	0.0026	0.0026	n/a	n/a	n/a
Sulfur	1/1	0.052	0.052	n/a	n/a	n/a
Titanium	1/1	0.02	0.02	n/a	n/a	n/a
Zinc	1/1	0.013	0.013	n/a	5	0[3]
Zirconium	1/1	0.00098	0.00098	n/a	n/a	n/a
Radionuclides (pCi/L) (e)						
Lead-214	1/1	9.1*	9.1*	n/a	n/a	n/a
Tritium	1/1	720*	720*	n/a	20,000	0[2]
Well 858						
Field measurements						
Conductivity (mS/cm)	1/1	0.2	0.2	n/a	n/a	n/a
Dissolved Oxygen (ppm)	1/1	7.5	7.5	n/a	n/a	n/a
pH (Std Unit)	1/1	8.0	8.0	n/a	n/a	n/a
RedOx (mV)	1/1	0.39	0.39	n/a	n/a	n/a
Temperature (deg C)	1/1	17	17	n/a	30.5	0[1]
Turbidity (NTU)	1/1	0.0	0.0	n/a	1	0[2]
Metals (mg/L)						
Aluminum	1/1	0.008	0.008	n/a	(0.05, 0.2)	1[3]
Barium	1/1	0.11	0.11	n/a	2	0[1]
Boron	1/1	0.0088	0.0088	n/a	n/a	n/a
Calcium	1/1	30	30	n/a	n/a	n/a
Chromium	1/1	0.0019	0.0019	n/a	1	0[1]
Copper	1/1	0.00054	0.00054	n/a	1.3	0[2]
Iron	1/1	0.095	0.095	n/a	0.3	0[3]
Lithium	1/1	0.005	0.005	n/a	n/a	n/a
Magnesium	1/1	6.2	6.2	n/a	n/a	n/a
Manganese	1/1	0.0018	0.0018	n/a	0.05	0[3]
Molybdenum	1/1	0.00029	0.00029	n/a	n/a	n/a
Nickel	1/1	0.00081	0.00081	n/a	0.1	0[1]
Phosphorous	1/1	0.026	0.026	n/a	n/a	n/a
Potassium	1/1	0.99	0.99	n/a	n/a	n/a
Silicon	1/1	6.9	6.9	n/a	n/a	n/a
Sodium	1/1	4.1	4.1	n/a	n/a	n/a
Strontium	1/1	0.088	0.088	n/a	n/a	n/a
Sulfur	1/1	4.0	4.0	n/a	n/a	n/a
Titanium	1/1	0.0027	0.0027	n/a	n/a	n/a
Uranium	1/1	0.00012	0.00012	n/a	n/a	n/a
Zinc	1/1	0.014	0.014	n/a	5	0[3]
Well 923 - Piezometer located east of the EGCR facility						
Field measurements						
Conductivity (mS/cm)	1/1	0.38	0.38	n/a	n/a	n/a
Dissolved Oxygen (ppm)	1/1	3.5	3.5	n/a	n/a	n/a
pH (Std Unit)	1/1	7.4	7.4	n/a	n/a	n/a

Table 2.2 (continued)

Parameter	N det/ N total	Measured values			Reference value	Number of values exceeding reference [ref] (d)
		Min(b)	Max(b)	Av(c)		
RedOx (mV)	1/1	-120	-120	n/a	n/a	n/a
Temperature (deg C)	1/1	18	18	n/a	30.5	0[1]
Metals (mg/L)						
Aluminum	1/1	0.021	0.021	n/a	(0.05, 0.2)	1[3]
Barium	1/1	0.086	0.086	n/a	2	0[1]
Boron	1/1	0.021	0.021	n/a	n/a	n/a
Calcium	1/1	44	44	n/a	n/a	n/a
Chromium	1/1	0.0012	0.0012	n/a	1	0[1]
Cobalt	1/1	0.00034	0.00034	n/a	n/a	n/a
Copper	1/1	0.002	0.002	n/a	1.3	0[2]
Iron	1/1	E0.46	E0.46	n/a	0.3	1[3]
Lead	1/1	0.00074	0.00074	n/a	0.005	0[1]
Lithium	1/1	0.077	0.077	n/a	n/a	n/a
Magnesium	1/1	12	12	n/a	n/a	n/a
Manganese	1/1	0.017	0.017	n/a	0.05	0[3]
Molybdenum	1/1	0.00025	0.00025	n/a	n/a	n/a
Nickel	1/1	0.0019	0.0019	n/a	0.1	0[1]
Potassium	1/1	26	26	n/a	n/a	n/a
Silicon	1/1	8.1	8.1	n/a	n/a	n/a
Sodium	1/1	8.0	8.0	n/a	n/a	n/a
Strontium	1/1	0.37	0.37	n/a	n/a	n/a
Sulfur	1/1	13	13	n/a	n/a	n/a
Thallium	1/1	0.00042	0.00042	n/a	0.002	0[1]
Titanium	1/1	0.0023	0.0023	n/a	n/a	n/a
Vanadium	1/1	0.0031	0.0031	n/a	n/a	n/a
Zinc	1/1	0.0077	0.0077	n/a	5	0[3]
Zirconium	1/1	0.00076	0.00076	n/a	n/a	n/a
Radionuclides (pCi/L) (e)						
Beta activity	1/1	26*	26*	n/a	50	0[2]
Tritium	1/1	320*	320*	n/a	20,000	0[2]
Volatile organics (ug/L)						
Methylene chloride	1/1	JB2.7	JB2.7	n/a	5	0[1]
Toluene	1/1	J0.62	J0.62	n/a	1,000	0[1]

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

Table 2.3. Constituents detected in SNS groundwater, 2005 (a)

Parameter	Measured values			Avg(c)	Standard error(d)
	N det/ N total	Min(b)	Max(b)		
Spring S-1 - Discharge point east-southeast of SNS site					
Field measurements					
Conductivity	11/11	0.14	0.52	0.26	0.041
Dissolved Oxygen (ppm)	11/11	3.1	11	7.2	0.79
pH (Std Unit)	11/11	6.4	7.8	n/a	n/a
Temperature (deg C)	11/11	9.3	23	15	1.5
Turbidity	11/11	0.0	980	120	87
Radionuclides (pCi/L)(e)					
Alpha activity	4/11	U-0.95	13*	~2.1*	1.1
Beta activity	6/11	U0.85	21*	~5.1*	1.6
Thorium-234	1/1	190*	190*	n/a	n/a
Uranium-238	1/1	190*	190*	n/a	n/a
Spring S-2 - Discharge point south of SNS site					
Field measurements					
Conductivity	11/11	0.21	0.32	0.25	0.011
Dissolved Oxygen (ppm)	11/11	1.3	9.9	4.4	0.85
pH (Std Unit)	11/11	6.5	7.5	n/a	n/a
Temperature (deg C)	11/11	10	18	14	0.94
Turbidity	11/11	3.0	77	22	7.0
Radionuclides (pCi/L) (e)					
Actinium-228	1/1	36*	36*	n/a	n/a
Alpha activity	6/11	U0.13	61*	~9.2	5.3
Beta activity	6/11	U1.1	60*	~9.8*	5.2
Bismuth-214	1/1	13*	13*	n/a	n/a
Carbon-14	1/10	U-6.3	7.1*	~0.61	1.1
Cesium-137	1/1	6.5*	6.5*	n/a	n/a
Lead-212	1/1	20*	20*	n/a	n/a
Lead-214	1/1	21*	21*	n/a	n/a
Potassium-40	2/11	U0.0	95*	~14	9.0
Radium-228	1/1	36*	36*	n/a	n/a
Thallium-208	1/1	9.5*	9.5*	n/a	n/a
Thorium-228	1/1	14*	14*	n/a	n/a
Thorium-230	2/2	6.9*	13*	10	3.1
Thorium-232	1/1	4.6*	4.6*	n/a	n/a
Uranium-233/234	1/1	9.0*	9.0*	n/a	n/a
Uranium-235/236	1/1	0.89*	0.89*	n/a	n/a
Uranium-238	1/1	8.3*	8.3*	n/a	n/a
Spring S-3 - Discharge point south of SNS site					
Field measurements					
Conductivity	12/12	0.22	0.33	0.28	0.01
Dissolved Oxygen (ppm)	12/12	5.2	12	8.1	0.66
pH (Std Unit)	12/12	6.7	7.7	n/a	n/a
Temperature (deg C)	12/12	6.6	18	14	0.92
Turbidity	12/12	0.0	51	9.5	4.1
Radionuclides (pCi/L) (e)					
Alpha activity	4/12	U-0.97	5.4*	~1.6*	0.53
Beta activity	6/12	U1.9*	16*	~4.6*	1.1
Bismuth-214	2/2	8.5*	8.5*	8.5*	0.005
Thorium-230	1/1	8.5*	8.5*	n/a	n/a

Table 2.3 (continued)

Parameter	Measured values			Avg(c)	Standard error(d)
	N det/ N total	Min(b)	Max(b)		
Spring S-4 - Discharge point west-southwest of SNS site					
Field measurements					
Conductivity	12/12	0.1	0.34	0.18	0.02
Dissolved Oxygen (ppm)	12/12	2.7	12	8.1	0.94
pH (Std Unit)	12/12	7.0	8.2	n/a	n/a
Temperature (deg C)	12/12	9.0	18	14	1.0
Turbidity	12/12	0.0	23	6.5	2.1
Radionuclides (pCi/L) (e)					
Alpha activity	1/12	U-1.4	2.2*	~0.44	0.29
Beta activity	3/12	U-0.3	11*	~2.5*	0.81
Lead-212	1/1	6.1*	6.1*	n/a	n/a
Potassium-40	1/12	U0.0	44*	~13*	3.7
Thorium-234	1/1	140*	140*	n/a	n/a
Tritium	1/12	U-74	270*	~76*	29
Uranium-238	1/1	140*	140*	n/a	n/a
Spring S-5 - Discharge point north-northeast of SNS site					
Field measurements					
Conductivity	12/12	0.33	0.53	0.42	0.021
Dissolved Oxygen (ppm)	12/12	2.6	7.5	5.7	0.35
pH (Std Unit)	12/12	6.7	8.0	n/a	n/a
Temperature (deg C)	12/12	12	15	14	0.29
Turbidity	12/12	0.0	27	7.6	2.6
Radionuclides (pCi/L) (e)					
Alpha activity	12/12	9.2*	25*	16*	1.5
Beta activity	12/12	8.4*	46*	25*	3.8
Carbon-14	1/11	U-4.2	6.2*	~1.0	0.95
Thorium-234	1/1	150*	150*	n/a	n/a
Uranium-238	1/1	150*	150*	n/a	n/a
Spring S-5 - Discharge point west of SNS site					
Field measurements					
Conductivity	9/9	0.24	0.47	0.32	0.03
Dissolved Oxygen (ppm)	9/9	3.1	8.5	6.1	0.61
pH (Std Unit)	9/9	7.1	7.7	n/a	n/a
Temperature (deg C)	9/9	8.5	15	13	0.65
Turbidity	9/9	0.0	28	10	3.5
Radionuclides (pCi/L) (e)					
Alpha activity	6/9	U0.24	11*	~5.6*	1.4
Beta activity	7/9	U1.7*	18*	~9.0*	1.8
Thorium-230	1/1	6.9*	6.9*	n/a	n/a
Thorium-234	1/1	120*	120*	n/a	n/a
Uranium-238	1/1	120*	120*	n/a	n/a

Table 2.3 (continued)

Parameter	Measured values			Avg(c)	Standard error(d)
	N det/ N total	Min(b)	Max(b)		
Spring SP-1 - Discharge point south of SNS site					
Field measurements					
Conductivity	12/12	0.2	0.32	0.24	0.0093
Dissolved Oxygen (ppm)	12/12	1.6	11	7.6	0.84
pH (Std Unit)	12/12	6.9	8.0	n/a	n/a
Temperature (deg C)	12/12	7.4	20	14	1.2
Turbidity	12/12	0.0	57	19	6.2
Radionuclides (pCi/L) (e)					
Alpha activity	3/12	U-0.89	3.4*	~1.0*	0.33
Beta activity	3/12	U0.19	5.2*	~2.8*	0.45
Surface Water Point SW-1 - Discharge point east-southeast of SNS site					
Field measurements					
Conductivity	10/10	0.1	0.25	0.17	0.018
Dissolved Oxygen (ppm)	10/10	0.9	8.3	4.9	0.87
pH (Std Unit)	10/10	6.5	7.3	n/a	n/a
Temperature (deg C)	10/10	8.1	17	14	0.91
Turbidity	10/10	0.0	18	3.7	2.0
Radionuclides (pCi/L) (e)					
Beta activity	1/10	U1.0	4.6*	~2.8*	0.37
Bismuth-214	1/1	8.3*	8.3*	n/a	n/a
Potassium-40	1/10	U0.0	U64*	~26*	5.5
Thorium-230	1/1	8.3*	8.3*	n/a	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.
(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 2.4. Constituents detected in HFIR groundwater at ORNL, 2005 (a)

Parameter	N det/ N total	Measured values			Standard error(c)
		Min	Max	Avg(b)	
NPDES Outfall 383 - Down-gradient monitoring point southwest of Building 7900					
Field measurements					
Dissolved Oxygen (ppm)	1/1	3.9	3.9	n/a	n/a
pH (Std Unit)	1/1	7.2	7.2	n/a	n/a
Temperature (deg C)	1/1	7.7	7.7	n/a	n/a
Radionuclides (pCi/L) (d)					
Tritium	3/3	11,000*	12,000*	12,000*	350
Well 4532 - Down-gradient well located southeast of Building 7900					
Field measurements					
Conductivity	3/3	0.42	0.51	0.46	0.027
Dissolved Oxygen (ppm)	3/3	0.83	5.0	2.4	1.3
pH (Std Unit)	3/3	7.0	7.3	n/a	n/a
RedOx (mV)	1/1	-250	-250	n/a	n/a
Temperature (deg C)	3/3	19	20	20	0.23
Turbidity	3/3	0.3	15	7.8	4.3
Radionuclides (pCi/L) (d)					
Tritium	3/3	4,800*	5,300*	5,100*	140
Well 4533 - Up-gradient well located northeast of Building 7900					
Field measurements					
Conductivity	1/1	0.44	0.44	n/a	n/a
Dissolved Oxygen (ppm)	1/1	4.7	4.7	n/a	n/a
pH (Std Unit)	1/1	7.3	7.3	n/a	n/a
Temperature (deg C)	1/1	19	19	n/a	n/a
Turbidity	1/1	3.0	3.0	n/a	n/a
Radionuclides (pCi/L) (d)					
Tritium	1/1	380*	380*	n/a	n/a
Well 658 - Down-gradient well south of Building 7900					
Field measurements					
Conductivity	1/1	0.58	0.58	n/a	n/a
Dissolved Oxygen (ppm)	1/1	1.2	1.2	n/a	n/a
pH (Std Unit)	1/1	7.3	7.3	n/a	n/a
Temperature (deg C)	1/1	18	18	n/a	n/a
Turbidity	1/1	0.0	0.0	n/a	n/a
Radionuclides (pCi/L) (d)					
Tritium	1/1	120,000*	120,000*	n/a	n/a
Well 661 - Down-gradient well west of HFIR Cooling Tower					
Field measurements					
Conductivity	3/3	0.52	0.61	0.55	0.03
Dissolved Oxygen (ppm)	3/3	1.8	7.1	4.2	1.6
pH (Std Unit)	3/3	7.2	7.5	n/a	n/a
RedOx (mV)	1/1	120	120	n/a	n/a
Temperature (deg C)	3/3	18	20	19	0.69
Turbidity	3/3	11	210	76	65
Radionuclides (pCi/L) (d)					
Tritium	3/3	150,000*	190,000*	170,000*	10,000

Table 2.4 (continued)

Parameter	N det/ N total	Measured values Min	Max	Avg(b)	Standard error(c)
Well 892 - Down-gradient well located between Wells 658 and 661					
Field measurements					
Conductivity	3/3	0.44	0.49	0.47	0.015
Dissolved Oxygen (ppm)	3/3	1.5	8.5	4.1	2.2
pH (Std Unit)	3/3	7.3	7.7	n/a	n/a
RedOx (mV)	1/1	-180	-180	n/a	n/a
Temperature (deg C)	3/3	18	21	20	0.87
Turbidity	3/3	1.0	10	5.7	2.6
Radionuclides (pCi/L) (d)					
Tritium	3/3	280,000*	380,000*	320,000*	30,000

(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) A tilde (~) indicates that estimated values and/or detection limits were used in the calculation.
(c) Standard error of the mean.
(d) Individual and average radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected at or above MDA.

Table 2.5. 2005 radionuclide concentrations in surface waters around ORNL

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

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

Table 2.6. 2005 radionuclide concentrations in stormwater at ORNL NPDES permitted locations

Parameter	Result detected above MDA	Concentration (pCi/L)(a)	DCG(b)	Percent of DCG(c)
		Outfall 010		
Alpha activity	yes	3.8*	n/a	n/a
Beta activity	5.3*	n/a	n/a	
Cesium-137	-0.94	3,000	n/a	
Cobalt-60	1.4*	5,000	n/a	
Tritium	-160	2,000,000	n/a	
		Outfall 016		
Alpha activity	yes	2.1*	n/a	n/a
Beta activity	1.0	n/a	n/a	
Cesium-137	-3.4	3,000	n/a	
Cobalt-60	1.0	5,000	n/a	
Tritium	540*	2,000,000	n/a	
		Outfall 033		
Alpha activity	0.85	n/a	n/a	
Beta activity	-1.4	n/a	n/a	
Cesium-137	-1.1	3,000	n/a	
Cobalt-60	0.72	5,000	n/a	
Tritium	400	2,000,000	n/a	
		Outfall 113		
Alpha activity	0.33	n/a	n/a	
Beta activity	yes	6.7*	n/a	n/a
Cesium-137	-0.99	3,000	n/a	
Cobalt-60	-0.18	5,000	n/a	
Tritium	-180	2,000,000	n/a	
		Outfall 141		
Alpha activity	2.2	n/a	n/a	
Beta activity	-0.82	n/a	n/a	
Cesium-137	-0.35	3,000	n/a	
Cobalt-60	0.89	5,000	n/a	
Tritium	100	2,000,000	n/a	
		Outfall 168		
Alpha activity	yes	3.4*	n/a	n/a
Beta activity	yes	9.6*	n/a	n/a
Cesium-137	-0.012	3,000	n/a	
Cobalt-60	-1.1	5,000	n/a	
Tritium	170	2,000,000	n/a	
		Outfall 205		
Alpha activity	1.8	n/a	n/a	
Beta activity	yes	13*	n/a	n/a
Cesium-137	1.7	3,000	n/a	
Cobalt-60	-0.24	5,000	n/a	
Tritium	-1,400	2,000,000	n/a	
		Outfall 206		
Alpha activity	1.7	n/a	n/a	
Beta activity	yes	11*	n/a	n/a
Cesium-137	0.98	3,000	n/a	
Cobalt-60	0.049	5,000	n/a	
Tritium	-130	2,000,000	n/a	

Table 2.6 (continued)

Parameter	Result detected above MDA	Concentration (pCi/L)(a)	DCG(b)	Percent of DCG(c)
		Outfall 214		
Alpha activity	yes	2.6*	n/a	n/a
Beta activity	yes	7.6*	n/a	n/a
Cesium-137	1.7*	3,000	n/a	
Cobalt-60	0.01	5,000	n/a	
Tritium	70	2,000,000	n/a	
		Outfall 218		
Alpha activity	yes	27*	n/a	n/a
Americium-241	-0.12	30	n/a	
Beta activity	yes	27*	n/a	n/a
Cesium-137	2.9*	3,000	n/a	
Cm-243/244	0.019	n/a	n/a	
Cobalt-60	-0.082	5,000	n/a	
Neptunium-237	0.11	30	n/a	
Plutonium-238	0.3	40	n/a	
Plutonium-239/240	0.14	30	n/a	
Thorium-228	-0.15	400	n/a	
Thorium-230	-0.81	300	n/a	
Thorium-232	0.26	50	n/a	
Thorium-234	0.2	n/a	n/a	
Tritium	-550	2,000,000	n/a	
Uranium - Alpha Activity	0.65*	500	n/a	
Uranium-234	0.45*	500	n/a	
Uranium-235	-0.031	600	n/a	
Uranium-236	-0.0037	500	n/a	
Uranium-238	0.2	600	n/a	
		Outfall 219		
Alpha activity	1.5	n/a	n/a	
Beta activity	3.4*	n/a	n/a	
Cesium-137	0.52	3,000	n/a	
Cobalt-60	1.1	5,000	n/a	
Tritium	-1,400	2,000,000	n/a	
		Outfall 221		
Alpha activity	yes	4.7*	n/a	n/a
Beta activity	4.9*	n/a	n/a	
Cesium-137	0.086	3,000	n/a	
Cobalt-60	1.6	5,000	n/a	
Tritium	160	2,000,000	n/a	
		Outfall 224		
Alpha activity	yes	3.4	n/a	n/a
Beta activity	4.6*	n/a	n/a	
Cesium-137	-1.1	3,000	n/a	
Cobalt-60	-1.7	5,000	n/a	
Tritium	-1,500	2,000,000	n/a	
		Outfall 231		
Alpha activity	1.9	n/a	n/a	
Beta activity	1.6	n/a	n/a	
Cesium-137	-0.49	3,000	n/a	
Cobalt-60	-0.39	5,000	n/a	
Tritium	-1,600	2,000,000	n/a	

Table 2.6 (continued)

Parameter	Result detected above MDA	Concentration (pCi/L)(a)	DCG(b)	Percent of DCG(c)
		Outfall 235		
Alpha activity	0.29	n/a	n/a	
Beta activity	-7.1	n/a	n/a	
Cesium-137	0.82	3,000	n/a	
Cobalt-60	-3.3	5,000	n/a	
Tritium	-69	2,000,000	n/a	
		Outfall 288		
Alpha activity	yes	39*	n/a	n/a
Americium-241	0.084	30	n/a	
Beta activity	yes	44*	n/a	n/a
Cesium-137	0.64	3,000	n/a	
Cm-243/244	0.023	n/a	n/a	
Cobalt-60	-0.12	5,000	n/a	
Neptunium-237	0.056	30	n/a	
Plutonium-238	0.71*	40	n/a	
Plutonium-239/240	-0.098	30	n/a	
Thorium-228	0.82*	400	n/a	
Thorium-230	-0.28	300	n/a	
Thorium-232	yes	1.3*	50	2.6
Thorium-234	yes	1.2*	n/a	n/a
Tritium	200	2,000,000	n/a	
Uranium - Alpha Activity	yes	2.7*	500	0.54
Uranium-234	yes	1.4*	500	0.28
Uranium-235	0.098	600	n/a	
Uranium-236	-0.0037	500	n/a	
Uranium-238	yes	1.2*	600	0.2
		Outfall 302		
Alpha activity	0.1	n/a	n/a	
Beta activity	yes	190*	n/a	n/a
Cesium-137	2.0*	3,000	n/a	
Cobalt-60	0.065	5,000	n/a	
Tritium	-1,000	2,000,000	n/a	
		Outfall 304		
Alpha activity	yes	2.0	n/a	n/a
Beta activity	yes	99*	n/a	n/a
Cesium-137	yes	15*	3,000	0.5
Cobalt-60	1.6	5,000	n/a	
Tritium	-920	2,000,000	n/a	
		Outfall 343		
Alpha activity	yes	2.9*	n/a	n/a
Beta activity	-4.0	n/a	n/a	
Cesium-137	-1.4	3,000	n/a	
Cobalt-60	0.023	5,000	n/a	
Tritium	-74	2,000,000	n/a	

Table 2.6 (continued)

Parameter	Result detected above MDA	Concentration (pCi/L)(a)	DCG(b)	Percent of DCG(c)
		Outfall 384		
Alpha activity	yes	7.6*	n/a	n/a
Beta activity	2.6	n/a	n/a	
Cesium-137	-0.076	3,000	n/a	
Cobalt-60	-0.47	5,000	n/a	
Tritium	80	2,000,000	n/a	

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

Table 2.7. 2005 radionuclide concentrations at ORNL NPDES permitted locations

Parameter	N det/ N total	Concentration (pCi/L)			Standard error(c)	DCG(d)	Percent of DCG(e)
		Min(a)	Max(a)	Av(b)			
Sewage Treatment Plant (X01)							
Alpha activity	0/12	-3.4	1.2	-0.19	0.4	n/a	n/a
Beta activity	12/12	120*	300*	220*	17	n/a	n/a
Strontium-89/90	12/12	50*	140*	97*	7.7	1,000	9.7
Coal Yard Runoff Treatment Facility (X02)							
Alpha activity	0/12	-33	18	-0.42	3.6	n/a	n/a
Beta activity	12/12	400*	730*	530*	23	n/a	n/a
Cesium-137	0/1	2.2*	2.2*	2.2	n/a	3,000	n/a
Cobalt-60	0/1	-0.51	-0.51	-0.51	n/a	5,000	n/a
Potassium-40	1/1	530*	530*	530	n/a	7,000	7.6
Strontium-89/90	1/1	120*	120*	120	n/a	1,000	12
Process Waste Treatment Complex (X12)							
Alpha activity	12/12	9.4*	60*	29*	5.2	n/a	n/a
Americium-241	0/1	0.12	0.12	0.12	n/a	30	n/a
Beta activity	12/12	320*	2,500*	890*	190	n/a	n/a
Cesium-137	12/12	180*	2,200*	720*	180	3,000	24
Cm-243/244	0/1	0.27*	0.27*	0.27	n/a	n/a	n/a
Cobalt-60	0/12	-0.68	2.9*	0.74*	0.32	5,000	n/a
Plutonium-238	0/1	0.027	0.027	0.027	n/a	40	n/a
Plutonium-239/240	0/1	-0.0025	-0.0025	-0.0025	n/a	30	n/a
Strontium-89/90	12/12	47*	130*	97*	9.4	1,000	9.7
Thorium-228	0/1	0.19*	0.19*	0.19	n/a	400	n/a
Thorium-230	0/1	-0.14	-0.14	-0.14	n/a	300	n/a
Thorium-232	0/1	-0.034	-0.034	-0.034	n/a	50	n/a
Thorium-234	1/1	3.0*	3.0*	3.0	n/a	n/a	n/a
Tritium	12/12	12,000*	95,000*	38,000*	6,900	2,000,000	1.9
Uranium - Alpha Activity	12/12	6.7*	53*	25*	4.6	500	5.1
Uranium-233/234	12/12	6.2*	48*	23*	4.3	500	4.7
Uranium-235	1/12	-0.038	0.2*	0.082*	0.023	600	0.014
Uranium-236	1/12	-0.011	0.095*	0.026*	0.01	500	0.0053
Uranium-238	12/12	0.42*	3.0*	1.5*	0.23	600	0.25
Melton Branch 1 (X13)							
Alpha activity	2/12	-0.45	8.1*	2.3*	0.7	n/a	n/a
Beta activity	12/12	330*	770*	530*	49	n/a	n/a
Cesium-137	1/12	-0.27	4.1*	1.2*	0.34	3,000	0.04
Cobalt-60	0/12	-1.7	2.1*	0.68*	0.32	5,000	n/a
Potassium-40	1/1	240*	240*	240	n/a	7,000	3.4
Strontium-89/90	12/12	130*	380*	240*	24	1,000	24
Tritium	12/12	230,000*	640,000*	420,000*	42,000	2,000,000	21
White Oak Creek (X14))							
Alpha activity	6/12	1.7	8.6*	3.6*	0.59	n/a	n/a
Beta activity	12/12	81*	130*	100*	5.2	n/a	n/a
Cesium-137	12/12	15*	59*	29*	4.1	3,000	0.98
Cobalt-60	0/12	-0.93	2.5*	0.74*	0.3	5,000	n/a
Strontium-89/90	12/12	21*	43*	31*	2.0	1,000	3.1
Tritium	12/12	1,300*	35,000*	8,800*	2,700	2,000,000	0.44

Table 2.7 (continued)

Parameter	N det/ N total	Concentration (pCi/L)			Standard error(c)	DCG(d)	Percent of DCG(e)
		Min(a)	Max(a)	Av(b)			
White Oak Dam (X15)							
Alpha activity	10/12	0.73	16*	6.9*	1.4	n/a	n/a
Beta activity	12/12	190*	550*	270*	27	n/a	n/a
Cesium-137	12/12	6.2*	390*	60*	30	3,000	2.0
Cobalt-60	0/12	-1.6	2.0*	0.56	0.37	5,000	n/a
Strontium-89/90	12/12	75*	110*	93*	3.7	1,000	9.3
Tritium	12/12	36,000*	100,000*	55,000*	5,000	2,000,000	2.8
Outfall 001							
Alpha activity	1/1	2.3*	2.3*	2.3	n/a	n/a	n/a
Beta activity	0/1	0.1	0.1	0.1	n/a	n/a	n/a
Outfall 081							
Alpha activity	0/1	1.1	1.1	1.1	n/a	n/a	n/a
Beta activity	1/1	54*	54*	54	n/a	n/a	n/a
Outfall 085							
Alpha activity	4/4	11*	19*	15*	1.8	n/a	n/a
Beta activity	4/4	360*	470*	400*	24	n/a	n/a
Strontium-89/90	4/4	170*	220*	200*	14	1,000	20
Uranium - Alpha Activity	4/4	14*	17*	16*	0.63	500	3.2
Uranium-233/234	3/3	12*	14*	13*	0.58	500	2.6
Uranium-234	1/1	13*	13*	13	n/a	500	2.6
Uranium-235	1/4	0.027	0.24*	0.11	0.046	600	0.018
Uranium-236	0/4	-0.022	0.055	0.012	0.02	500	n/a
Uranium-238	4/4	2.1*	3.0*	2.6*	0.19	600	0.44
Outfall 087							
Alpha activity	1/1	6.8*	6.8*	6.8	n/a	n/a	n/a
Beta activity	1/1	180*	180*	180	n/a	n/a	n/a
Cesium-137	0/1	0.84	0.84	0.84	n/a	3,000	n/a
Cobalt-60	0/1	0.5	0.5	0.5	n/a	5,000	n/a
Outfall 204							
Alpha activity	3/4	1.7*	9.5*	6.0*	1.9	n/a	n/a
Beta activity	4/4	160*	330*	230*	41	n/a	n/a
Strontium-89/90	4/4	34*	91*	56*	13	1,000	5.6
Outfall 207							
Alpha activity	3/4	0.66	6.6*	4.0*	1.2	n/a	n/a
Beta activity	4/4	13*	49*	29*	7.7	n/a	n/a
Cesium-137	0/4	-0.76	3.1*	1.7	0.9	3,000	n/a
Cobalt-60	0/4	-0.49	0.72	0.2	0.26	5,000	n/a
Strontium-89/90	4/4	6.5*	19*	12*	3.0	1,000	1.2
Outfall 211							
Alpha activity	1/4	-0.6	2.5	0.7	0.68	n/a	n/a
Beta activity	1/4	0.24	8.1*	3.9	1.7	n/a	n/a
Strontium-89/90	2/4	-0.48	4.0*	2.3	1.1	1,000	0.23
Outfall 217							
Alpha activity	0/1	2.2*	2.2*	2.2	n/a	n/a	n/a
Beta activity	0/1	2.6	2.6	2.6	n/a	n/a	n/a
Outfall 219							
Alpha activity	0/1	0.1	0.1	0.1	n/a	n/a	n/a
Beta activity	0/1	6.2*	6.2*	6.2	n/a	n/a	n/a

Table 2.7 (continued)

Parameter	N det/ N total	Concentration (pCi/L)			Standard error(c)	DCG(d)	Percent of DCG(e)
		Min(a)	Max(a)	Av(b)			
			Outfall 234				
Alpha activity	0/1	0.29	0.29	0.29	n/a	n/a	n/a
Beta activity	0/1	2.0	2.0	2.0	n/a	n/a	n/a
			Outfall 281				
Alpha activity	0/4	-1.3	0.95	-0.1	0.53	n/a	n/a
Beta activity	3/4	3.7*	13*	8.0*	1.9	n/a	n/a
Cesium-137	0/4	-0.57	1.1	0.17	0.37	3,000	n/a
Cobalt-60	0/4	-0.94	2.1*	0.17	0.67	5,000	n/a
Tritium	4/4	1,500*	25,000*	8,700	5,600	2,000,000	0.44
			Outfall 282				
Alpha activity	0/4	-0.91	1.2	0.13	0.44	n/a	n/a
Beta activity	2/4	4.7*	7.9*	6.3*	0.67	n/a	n/a
			Outfall 290				
Cesium-137	0/1	0.35	0.35	0.35	n/a	3,000	n/a
Cobalt-60	0/1	-0.29	-0.29	-0.29	n/a	5,000	n/a
			Outfall 302				
Alpha activity	9/12	-2.1	33*	9.9*	2.6	n/a	n/a
Beta activity	12/12	60*	3,800*	890*	320	n/a	n/a
Cesium-137	11/12	-3.5	200*	69*	17	3,000	2.3
Cobalt-60	0/12	-1.9	2.6*	0.44	0.39	5,000	n/a
Strontium-89/90	12/12	31*	2,000*	410*	170	1,000	41
Tritium	9/12	-44	21,000*	6,200*	1,900	2,000,000	0.31
Uranium - Alpha Activity	3/3	9.8*	21*	14*	3.6	500	2.8
Uranium-233/234	3/3	9.5*	20*	13*	3.4	500	2.6
Uranium-235	0/3	-0.047	0.019	-0.011	0.019	600	n/a
Uranium-236	0/3	-0.022	0.015	-0.0063	0.011	500	n/a
Uranium-238	2/3	0.3*	1.0*	0.65*	0.2	600	0.11
			Outfall 304				
Alpha activity	6/12	-3.0	27*	6.1*	2.4	n/a	n/a
Beta activity	12/12	85*	1,500*	400*	120	n/a	n/a
Cesium-137	12/12	8.0*	400*	120*	43	3,000	3.9
Cobalt-60	0/12	-0.45	2.5*	0.81*	0.23	5,000	n/a
Strontium-89/90	12/12	24*	550*	150*	40	1,000	15
Tritium	0/12	-310	800*	160	120	2,000,000	n/a
Uranium - Alpha Activity	1/1	11*	11*	11	n/a	500	2.2
Uranium-233/234	1/1	8.7*	8.7*	8.7	n/a	500	1.7
Uranium-235	0/1	0.12	0.12	0.12	n/a	600	n/a
Uranium-236	0/1	0.018	0.018	0.018	n/a	500	n/a
Uranium-238	1/1	1.9*	1.9*	1.9	n/a	600	0.32
			Outfall 365				
Alpha activity	1/4	0.5	6.8*	2.4	1.5	n/a	n/a
Beta activity	4/4	15*	54*	40*	9.1	n/a	n/a

Table 2.7. (continued)

Parameter	N det/ N total	Concentration (pCi/L)			Standard error(c)	DCG(d)	Percent of DCG(e)
		Min(a)	Max(a)	Av(b)			
			Outfall 368				
Alpha activity	0/4	-0.11	4.9*	1.6	1.2	n/a	n/a
Beta activity	3/4	0.38	67*	24	15	n/a	n/a
Cesium-137	0/4	-0.65	1.2	0.59	0.42	3,000	n/a
Cobalt-60	0/4	-1.7	1.3	0.053	0.67	5,000	n/a
			Outfall 383				
Alpha activity	1/1	5.1*	5.1*	5.1	n/a	n/a	n/a
Beta activity	1/1	11*	11*	11	n/a	n/a	n/a
Tritium	1/1	13,000*	13,000*	13,000	n/a	2,000,000	0.65

(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 2.8. 2005 analyses for ORNL reference surface waters

Parameter	N det/ N total	Concentration (pCi/L)			Standard error(c)	Ref. Value (d)	Percent of Ref. Value(e)
		Min(a)	Max(a)	Avg(b)			
White Oak Creek Headwaters							
Field measurements							
Conductivity	52/52	0.12	0.33	0.24	0.0066	n/a	n/a
Dissolved Oxygen	52/52	7.3	12	9.7	0.14	5	200
pH	52/52	7.1	8.3	n/a	0.035	n/a	n/a
Temperature	52/52	4.6	19	13	0.51	30.5	43
Turbidity	52/52	0.0	53	9.9	1.5	n/a	n/a
Metals (mg/L)							
Antimony	0/12	<0.0005	<0.0005	~0.0005	0.0	n/a	n/a
Arsenic	1/12	<0.001	<0.005	~0.0015	0.00034	0.34	0.45
Cadmium	0/12	<0.0005	<0.0005	~0.0005	0.0	0.002	25
Chromium	9/12	<0.002	0.0046	~0.0025	0.00021	n/a	n/a
Copper	8/12	<0.001	0.0054	~0.0019	0.00041	0.013	15
Iron	8/12	<0.25	3.5	~1.1	0.27	n/a	n/a
Lead	12/12	0.00017	0.0031	0.0011	0.00025	0.065	1.6
Nickel	4/12	<0.001	<0.01	~0.0023	0.00077	0.47	0.49
Selenium	0/12	<0.002	<0.01	~0.0027	0.00067	0.02	13
Silver	0/12	<0.0002	<0.0002	~0.0002	0.0	0.0032	6.3
Zinc	12/12	0.003	0.019	0.011	0.0014	0.12	8.8

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

Table 2.9. NPDES Permit Number TN0002941, 2005 ORNL outfall monitoring

Parameter	Concentration				Standard error(c)
	N det/ N total	Min(a)	Max(a)	Avg(b)	
Category 1 outfalls					
Field measurements					
Flow (gpm)	20/20	0.1	75	7.4	3.7
pH (Std Unit)	20/20	7.5	8.2	n/a	n/a
Category 2 outfalls					
Field measurements					
Flow (gpm)	20/20	0.1	20	3.5	1.2
pH (Std Unit)	20/20	7.4	8.2	n/a	n/a
Category 3 outfalls					
Field measurements					
Flow (gpm)	49/49	0.1	45	12	2.0
pH (Std Unit)	49/49	7.2	8.1	n/a	n/a
Category 4 outfalls					
Field measurements					
Flow (gpm)	333/333	0.1	400	52	3.7
pH (Std Unit)	333/333	7.0	8.4	n/a	n/a
Temperature (deg C)	333/333	5.8	30	18	0.28
Cooling Tower Blowdown outfalls					
Field measurements					
Flow (gpm)	4/4	25	35	30	2.0
pH (Std Unit)	4/4	8.0	8.4	n/a	n/a
Temperature (deg C)	4/4	23	30	26	1.4
Total Residual Oxidant (mg/L)	0/4	<0.05	<0.05	~0.05	0.0
Physical					
Suspended Solids (mg/L)	2/4	<1.0	5.2	~3.1	1.2
Cooling Tower Blowdown/Cooling Water outfalls					
Field measurements					
Flow (gpm)	48/48	7.0	150	36	3.2
pH (Std Unit)	48/48	6.8	8.2	n/a	n/a
Total Residual Oxidant (mg/L)	1/49	<0.05	1.4	~0.077	0.027
Groundwater/Pumpwater outfalls					
Field measurements					
Flow (gpm)	4/4	0.1	0.25	0.14	0.038
pH (Std Unit)	4/4	7.4	7.7	n/a	n/a
Steam Condensate outfalls					
Field measurements					
Flow (gpm)	12/12	0.1	0.25	0.14	0.02
pH (Std Unit)	12/12	7.5	8.1	n/a	n/a
Temperature (deg C)	12/12	30	36	33	0.65

(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. NPDES Permit Number TN0002941,
2005 ORNL Instream Chlorine monitoring

Parameter	Concentration				Standard error(c)
	N det/ N total	Min(a)	Max(a)	Avg(b)	
	First Creek				
Field measurements					
pH (Std Unit)	48/48	7.0	8.3	n/a	0.033
Temperature (deg C)	48/48	9.8	21	15	0.5
Total Residual Oxidant (mg/L)	0/48	<0.05	<0.05	~0.05	0.0
	Fifth Creek				
Field measurements					
pH (Std Unit)	72/72	7.3	8.1	n/a	0.022
Temperature (deg C)	72/72	12	22	16	0.37
Total Residual Oxidant (mg/L)	0/72	<0.05	<0.05	~0.05	0.0
	White Oak Creek				
Field measurements					
pH (Std Unit)	144/144	7.2	8.1	n/a	0.015
Temperature (deg C)	144/144	9.9	24	17	0.32
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 2.11. Surface water analyses (2005) at ORNL Environmental Monitoring Plan surface water locations (a)

Parameter	N det/ N total	Concentration			Standard error(d)	TWQC(e)
		Min(b)	Max(b)	Avg(c)		
First Creek just upstream of Northwest Tributary (1STCK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	8.9	9.3	9.1	0.2	n/a
pH (Std Unit)	2/2	8.0	8.7	n/a	n/a	n/a
Temperature (deg C)	2/2	15	18	16	1.4	n/a
Radionuclides (pCi/L) (f)						
Beta activity	2/2	31*	49*	40	9.0	n/a
Strontium-89/90	2/2	14*	17*	15*	1.5	40
Bear Creek downstream from Y-12 Complex inputs (BCK 0.6)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	6.2	6.9	6.6	0.35	5
pH (Std Unit)	2/2	7.8	8.3	n/a	n/a	n/a
Temperature (deg C)	2/2	16	17	16	0.65	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	2/2	4.3*	6.5*	5.4	1.1	n/a
Beta activity	2/2	3.5*	6.9*	5.2	1.7	n/a
Thorium-230	1/2	0.0	0.49*	0.24	0.24	12
Uranium-233/234	2/2	1.6*	2.2*	1.9*	0.3	20
Uranium-238	2/2	2.7*	3.4*	3.0*	0.34	24
Clinch River downstream from ORNL (CRK 32)						
Field measurements						
Dissolved Oxygen (ppm)	12/12	5.9	11	8.4	0.48	n/a
pH (Std Unit)	12/12	7.2	9.0	n/a	n/a	n/a
Temperature (deg C)	12/12	8.5	23	15	1.5	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	1/12	U-0.27	2.0*	~0.61*	0.18	n/a
Beta activity	8/12	U0.94*	5.8*	~2.8*	0.35	n/a
Strontium-89/90	2/12	U-0.35	1.7*	~0.39*	0.2	40
Tritium	3/12	U-79	570*	~170*	51	80,000
Water supply intake for Knox County (CRK 58)						
Field measurements						
Dissolved Oxygen (ppm)	12/12	7.6	13	9.6	0.47	n/a
pH (Std Unit)	12/12	6.7	8.7	n/a	n/a	n/a
Temperature (deg C)	12/12	9.6	26	17	1.7	30.5
Radionuclides (pCi/L) (f)						
Beta activity	4/12	U-0.21	5.1*	~2.0*	0.4	n/a
Melton Hill Reservoir above city of Oak Ridge water intake (CRK 66)						
Field measurements						
Dissolved Oxygen (ppm)	12/12	7.5	11	9.0	0.33	n/a
pH (Std Unit)	12/12	6.6	8.7	n/a	n/a	n/a
Temperature (deg C)	12/12	9.4	27	17	1.6	30.5
Radionuclides (pCi/L) (f)						
Beta activity	5/12	U-0.69	3.9*	~1.8*	0.37	n/a

Table 2.11 (continued)

Parameter	N det/ N total	Concentration			Standard error(d)	TWQC(e)
		Min(b)	Max(b)	Avg(c)		
East Fork Poplar Creek prior to entering Poplar Creek (EFK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	6.0	6.1	6.1	0.05	5
pH (Std Unit)	2/2	7.7	8.3	n/a	n/a	n/a
Temperature (deg C)	2/2	17	18	18	0.4	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	1/2	U1.8*	2.6*	~2.2	0.41	n/a
Beta activity	1/2	U1.8*	3.7*	~2.7	0.95	n/a
East Fork Poplar Creek downstream from floodplain (EFK 5.4)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	7.1	9.1	8.1	1.0	5
pH (Std Unit)	2/2	7.7	7.9	n/a	n/a	n/a
Temperature (deg C)	2/2	17	18	18	0.7	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	2/2	2.4*	3.0*	2.7*	0.3	n/a
Beta activity	2/2	3.1*	5.6*	4.4	1.3	n/a
Uranium-233/234	1/2	0.0	0.84*	0.42	0.42	20
Uranium-238	1/2	0.0	0.85*	0.43	0.43	24
Fifth Creek just upstream of White Oak Creek at ORNL (FIFTHCK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	8.8	9.6	9.2	0.4	n/a
pH (Std Unit)	2/2	8.0	8.7	n/a	n/a	n/a
Temperature (deg C)	2/2	15	17	16	1.0	n/a
Radionuclides (pCi/L) (f)						
Alpha activity	1/2	U1.2*	1.8*	~1.5	0.27	n/a
Beta activity	2/2	24*	57*	41	17	n/a
Strontium-89/90	2/2	14*	20*	17	3.0	40
Grassy Creek upstream of SEG and IT Corp. (GCK 3.6)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	5.9	7.6	6.8	0.85	n/a
pH (Std Unit)	2/2	7.5	7.7	n/a	n/a	n/a
Temperature (deg C)	2/2	16	17	16	0.7	n/a
Metals (mg/L)						
Aluminum	2/2	0.091	0.16	0.13	0.035	n/a
Barium	2/2	0.032	0.056	0.044	0.012	n/a
Boron	2/2	0.01	0.013	0.012	0.0017	n/a
Calcium	2/2	22	44	33	11	n/a
Chromium	1/2	<0.001	0.0027	~0.0019	0.00086	n/a
Cobalt	2/2	0.00032	0.00046	0.00039	0.000069	n/a
Copper	2/2	0.00085	0.0022	0.0015	0.00068	n/a
Iron	2/2	0.36	0.54	0.45	0.091	n/a
Lead	2/2	0.00065	0.004	0.0023	0.0017	n/a
Magnesium	2/2	E7.1	14	~11	3.3	n/a
Manganese	2/2	0.048	0.063	0.056	0.0074	n/a
Molybdenum	1/2	<0.0001	0.00015	~0.00013	0.000026	n/a
Nickel	2/2	0.00095	0.0021	0.0016	0.00059	n/a
Potassium	2/2	1.1	1.3	1.2	0.11	n/a
Selenium	1/2	<0.0025	0.0027	~0.0026	0.000085	n/a
Sodium	2/2	2.5	2.5	2.5	0.03	n/a

Table 2.11 (continued)

Parameter	N det/ N total	Concentration			Standard error(d)	TWQC(e)
		Min(b)	Max(b)	Avg(c)		
Strontium	2/2	0.042	0.092	0.067	0.025	n/a
Sulfur	2/2	0.62	1.6	1.1	0.5	n/a
Titanium	2/2	0.0028	0.0034	0.0031	0.00029	n/a
Uranium	2/2	0.000099	0.00024	0.00017	0.000071	n/a
Vanadium	1/2	<0.002	0.0053	~0.0037	0.0017	n/a
Zinc	2/2	0.0029	0.0033	0.0031	0.00019	n/a
Radionuclides (pCi/L) (f)						
Alpha activity	1/2	U0.28	2.6*	~1.5	1.2	n/a
Beta activity	2/2	2.3*	3.5*	2.9	0.63	n/a
Ish Creek prior to entering CRK 30.8 (ICK 0.7)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	8.1	8.7	8.4	0.3	n/a
pH (Std Unit)	2/2	7.9	8.7	n/a	n/a	n/a
Temperature (deg C)	2/2	15	18	17	1.5	n/a
Radionuclides (pCi/L) (f)						
Alpha activity	1/2	U0.62	2.5*	~1.6	0.94	n/a
Beta activity	2/2	2.6*	3.3*	2.9*	0.37	n/a
McCoy Branch prior to entering CRK 60.3 (McCBK 1.8)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	7.5	9.8	8.7	1.2	n/a
pH (Std Unit)	2/2	8.0	8.6	n/a	n/a	n/a
Temperature (deg C)	2/2	11	21	16	5.1	n/a
Radionuclides (pCi/L) (f)						
Alpha activity	1/2	U0.58	1.5*	~1.0	0.44	n/a
Melton Branch downstream from ORNL (MEK 0.2)						
Field measurements						
Dissolved Oxygen (ppm)	6/6	6.2	14	10	1.0	5
pH (Std Unit)	6/6	8.0	8.9	n/a	n/a	n/a
Temperature (deg C)	6/6	8.7	23	16	2.5	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	5/6	U-0.5	33*	~7.5	5.1	n/a
Beta activity	6/6	310*	1,500*	680*	190	n/a
Cesium-137	1/6	0.0	24*	3.9	3.9	120
Plutonium-238	1/6	0.0	1.3*	0.21	0.21	1.6
Strontium-89/90	6/6	120*	550*	290*	70	40
Thorium-228	1/6	0.0	0.76*	0.13	0.13	16
Thorium-230	1/6	0.0	1.3*	0.22	0.22	12
Thorium-232	1/6	0.0	0.65*	0.11	0.11	2
Tritium	6/6	130,000*	560,000*	360,000*	58,000	80,000
Uranium-233/234	1/6	0.0	1.1*	0.19	0.19	20
Uranium-238	3/6	0.0	1.0*	0.43*	0.2	24
Northwest Tributary prior to entering 1st Creek at ORNL (NWTK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	5.8	7.7	6.8	0.95	n/a
pH (Std Unit)	2/2	7.9	8.4	n/a	n/a	n/a
Temperature (deg C)	2/2	15	18	16	1.8	n/a
Radionuclides (pCi/L) (f)						
Alpha activity	1/2	U0.035	3.5*	~1.7	1.7	n/a
Beta activity	2/2	18*	110*	64	46	n/a

Table 2.11 (continued)

Parameter	N det/ N total	Concentration			Standard error(d)	TWQC(e)
		Min(b)	Max(b)	Avg(c)		
Strontium-89/90	2/2	5.9*	44*	25	19	40
Uranium-233/234	1/2	0.0	0.64*	0.32	0.32	20
Uranium-238	1/2	0.0	0.48*	0.24	0.24	24
Raccoon Creek sampling station prior to entering CRK 31 (RCK 2.0)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	4.8	6.7	5.8	0.95	n/a
pH (Std Unit)	2/2	7.8	8.4	n/a	n/a	n/a
Temperature (deg C)	2/2	14	17	16	1.2	n/a
Radionuclides (pCi/L) (f)						
Beta activity	2/2	13*	170*	91	78	n/a
Cobalt-60	1/2	0.0	3.9*	2.0	2.0	200
Strontium-89/90	2/2	8.8*	76*	42	34	40
Walker Branch prior to entering CRK 53.4 (WBK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	7.5	8.4	8.0	0.45	n/a
pH (Std Unit)	2/2	8.0	8.5	n/a	n/a	n/a
Temperature (deg C)	2/2	14	17	16	1.4	n/a
Radionuclides (pCi/L) (f)						
Alpha activity	1/2	U0.82*	2.0*	~1.4	0.61	n/a
Beta activity	1/2	U0.56	4.4*	~2.5	1.9	n/a
White Oak Lake at White Oak Dam (WCK 1.0)						
Field measurements						
Dissolved Oxygen (ppm)	12/12	4.4	13	8.4	0.62	5
pH (Std Unit)	12/12	6.8	9.0	n/a	n/a	n/a
Temperature (deg C)	12/12	6.2	26	18	2.0	30.5
Metals (mg/L)						
Aluminum	12/12	0.25	E3.3	~1.2	0.28	n/a
Antimony	1/12	<0.00028	0.00081	~0.00047	0.000042	n/a
Arsenic	6/12	<0.001	0.0064	~0.0021	0.00041	0.34
Barium	12/12	0.039	E0.061	~0.047	0.0018	n/a
Beryllium	1/12	<0.00008	0.00014	~0.000099	0.0000047	n/a
Boron	12/12	J0.017	0.037	~0.025	0.0017	n/a
Cadmium	3/12	<0.00004	0.00012	~0.000091	0.0000067	0.002
Calcium	12/12	35	50	43	1.1	n/a
Chromium	12/12	0.0011	0.015	0.0059	0.0013	n/a
Cobalt	12/12	0.00033	0.0012	0.00063	0.000079	n/a
Copper	12/12	0.0025	0.008	0.0043	0.00044	0.013
Iron	12/12	0.56	E2.7	~1.2	0.18	n/a
Lead	11/12	<0.0005	0.0028	~0.0014	0.00024	0.065
Lithium	11/12	<0.002	0.005	~0.003	0.00028	n/a
Magnesium	12/12	8.0	13	11	0.42	n/a
Manganese	12/12	J0.057	E0.17	~0.1	0.011	n/a
Mercury	2/12	<0.000047	0.00012	~0.00006	0.0000072	0.0014
Molybdenum	12/12	J0.002	0.017	~0.008	0.0014	n/a
Nickel	12/12	0.0013	0.0039	0.0023	0.00022	0.47
Phosphorous	12/12	J0.076	0.29	~0.18	0.02	n/a
Potassium	12/12	2.1	6.2	3.9	0.35	n/a
Selenium	4/12	0.0016	0.0028	0.0025	0.000091	0.02
Silver	5/12	<0.00004	0.00055	~0.00023	0.000041	0.0032

Table 2.11 (continued)

Parameter	N det/ N total	Concentration			Standard error(d)	TWQC(e)
		Min(b)	Max(b)	Avg(c)		
Sodium	12/12	13	36	23	2.2	n/a
Strontium	12/12	J0.085	0.12	~0.11	0.003	n/a
Sulfur	12/12	10	E27	~19	1.7	n/a
Thallium	3/12	0.000084	<0.0004	~0.00033	0.000038	n/a
Titanium	12/12	0.0031	0.11	0.021	0.0083	n/a
Uranium	12/12	0.0017	J0.0031	~0.0024	0.00011	n/a
Vanadium	7/12	<0.002	0.0063	~0.0042	0.00046	n/a
Zinc	12/12	0.0091	0.029	0.017	0.0018	0.12
Zirconium	11/12	0.00039	0.0031	0.0014	0.00026	n/a
Radionuclides (pCi/L) (f)						
Alpha activity	12/12	3.8*	19*	7.6*	1.2	n/a
Beta activity	12/12	190*	310*	240*	9.4	n/a
Cesium-137	12/12	19*	360*	76*	29	120
Potassium-40	1/12	U0.0	U37*	~13*	4.0	280
Strontium-89/90	12/12	68*	120*	99*	4.7	40
Thorium-228	1/12	0.0	0.26*	0.022	0.022	16
Thorium-230	1/12	0.0	0.68*	0.057	0.057	12
Tritium	12/12	26,000*	100,000*	53,000*	6,000	80,000
Uranium-233/234	12/12	0.87*	7.4*	3.8*	0.52	20
Uranium-235/236	3/12	0.0	0.78*	0.11	0.068	n/a
Uranium-238	12/12	0.31*	1.4*	0.95*	0.084	24
Volatile organics (ug/L)						
Acetone	2/12	J3.5	25	~6.5	1.7	n/a
Chloroform	9/12	J0.25	1.4	~0.8	0.1	n/a
Toluene	1/12	J0.31	U1.0	~0.94	0.058	n/a
White Oak Creek downstream from ORNL (WCK 2.6)						
Field measurements						
Dissolved Oxygen (ppm)	6/6	8.0	10	9.3	0.33	5
pH (Std Unit)	6/6	8.0	8.5	n/a	n/a	n/a
Temperature (deg C)	6/6	11	24	17	1.9	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	6/6	2.3*	9.3*	5.2*	0.94	n/a
Beta activity	6/6	87*	160*	120*	11	n/a
Cesium-137	6/6	11*	120*	57*	16	120
Lead-214	1/6	0.0	15*	2.5	2.5	n/a
Potassium-40	1/6	U0.0	52*	~13	8.8	280
Strontium-89/90	6/6	29*	44*	35*	2.4	40
Tritium	6/6	1,100*	7,800*	3,500*	1,100	80,000
Uranium-233/234	5/6	0.0	4.7*	2.6*	0.71	20
Uranium-238	4/6	0.0	1.1*	0.45*	0.19	24

Table 2.11 (continued)

Parameter	N det/ N total	Concentration			Standard error(d)	TWQC(e)
		Min(b)	Max(b)	Avg(c)		
White Oak Creek upstream from ORNL (WCK 6.8)						
Field measurements						
Dissolved Oxygen (ppm)	4/4	8.5	11	10	0.6	5
pH (Std Unit)	4/4	7.3	8.0	n/a	n/a	n/a
Temperature (deg C)	4/4	12	18	14	1.2	30.5
Radionuclides (pCi/L) (f)						
Strontium-89/90	1/4	U0.02	2.0*	~0.56	0.48	40
Tritium	1/4	U-31	230*	~67	59	80,000

(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 Recreation and Domestic Use, as amended (CRK 32, CRK 58, CRK 66) or Tennessee General Water Quality Criteria for Freshwater Fish and Aquatic Life, as amended (BCK 0.6, EFK 0.1, EFK 5.4, MEK 0.2, WCK 1.0, WCK 2.6, WCK 6.8). 4% of DOE DCG used for radionuclides, where applicable.
(f) Individual and average radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected at or above MDA.

3. Oak Ridge Reservation Surveillance

Table 3.1. 2005 tissue concentrations in sunfish(a)

Parameter	N det/ N total	Concentration			Standard error(d)
		Min(b)	Max(b)	Avg(c)	
Clinch River downstream from all DOE ORR inputs (CRK 16)					
Metals (mg/kg)					
Aluminum	2/2	1.2	1.6	1.4	0.2
Arsenic	2/2	0.4	0.41	0.41	0.005
Barium	2/2	0.13	0.24	0.19	0.055
Boron	2/2	0.067	0.078	0.073	0.0055
Calcium	2/2	840	3,100	2,000	1,100
Chromium	2/2	0.07	0.087	0.079	0.0085
Cobalt	2/2	0.011	0.014	0.013	0.0015
Copper	2/2	0.21	0.25	0.23	0.02
Iron	2/2	3.1	3.6	3.4	0.25
Lead	1/2	<0.033	0.043	~0.038	0.005
Lithium	2/2	0.037	0.047	0.042	0.005
Magnesium	2/2	250	280	270	15
Manganese	2/2	0.93	1.4	1.2	0.24
Mercury	2/2	0.22	0.28	0.25	0.03
Molybdenum	2/2	0.057	0.085	0.071	0.014
Phosphorous	2/2	2,300	3,500	2,900	600
Potassium	2/2	2,900	3,000	3,000	50
Selenium	2/2	0.55	0.64	0.6	0.045
Silicon	2/2	2.4	3.1	2.8	0.35
Silver	2/2	0.018	0.019	0.019	0.0005
Sodium	2/2	470	540	510	35
Strontium	2/2	0.55	2.0	1.3	0.73
Thallium	2/2	0.0057	0.0074	0.0066	0.00085
Titanium	2/2	0.029	0.033	0.031	0.002
Uranium	2/2	0.0014	0.0017	0.0016	0.00015
Vanadium	1/2	<0.0076	0.01	~0.0088	0.0012
Zinc	2/2	15	15	15	0.0
Pesticides and PCBs (ug/kg)					
4,4'-DDE	2/2	J0.96	2.9	~1.9	0.97
PCB-1260	2/2	J15	22	~19	3.5
Radionuclides (pCi/g) (e)					
Beta activity	2/2	1.4*	1.6*	1.5*	0.075
Potassium-40	2/2	3.1*	4.3*	3.7*	0.58
Metals (mg/kg)					
Aluminum	2/2	1.3	1.3	1.3	0.0
Arsenic	2/2	0.45	0.45	0.45	0.0
Barium	2/2	0.26	0.51	0.39	0.13
Beryllium	1/2	<0.0016	0.0018	~0.0017	0.0001
Boron	2/2	0.04	0.052	0.046	0.006
Calcium	2/2	3,200	6,900	5,100	1,900
Chromium	2/2	0.097	0.13	0.11	0.017
Copper	2/2	0.24	0.24	0.24	0.0
Iron	2/2	3.4	3.5	3.5	0.05
Lead	1/2	<0.033	0.075	~0.054	0.021
Lithium	2/2	0.039	0.051	0.045	0.006
Magnesium	2/2	280	330	310	25

Table 3.1 (continued)

Parameter	N det/ N total	Concentration			Standard error(d)
		Min(b)	Max(b)	Avg(c)	
Manganese	2/2	1.7	3.2	2.5	0.75
Mercury	2/2	0.044	0.052	0.048	0.004
Molybdenum	2/2	0.04	0.062	0.051	0.011
Phosphorous	2/2	3,700	5,400	4,600	850
Potassium	2/2	3,100	3,100	3,100	0.0
Selenium	2/2	0.57	0.65	0.61	0.04
Silicon	2/2	2.8	2.9	2.9	0.05
Silver	2/2	0.014	0.014	0.014	0.0
Sodium	2/2	520	550	540	15
Strontium	2/2	2.0	4.3	3.2	1.2
Thallium	2/2	0.007	0.0084	0.0077	0.0007
Titanium	2/2	0.027	0.051	0.039	0.012
Uranium	2/2	0.0014	0.0014	0.0014	0.0
Vanadium	2/2	0.0099	0.016	0.013	0.0031
Zinc	2/2	15	18	17	1.5
Pesticides and PCBs (ug/kg)					
4,4'-DDE	2/2	J0.83	J1.0	~0.92	0.085
PCB-1260	2/2	J13	17	~15	2.0
Radionuclides (pCi/g) (e)					
Beta activity	2/2	1.6*	2.0*	1.8*	0.2
Potassium-40	2/2	3.4*	3.5*	3.5*	0.065
Strontium-90	1/2	U0.029	0.11*	~0.067	0.038
Tritium	2/2	1.7*	2.5*	2.1	0.39
Clinch River (Solway Bridge) upstream from all DOE ORR inputs (CRK 70)					
Metals (mg/kg)					
Aluminum	2/2	1.9	2.4	2.2	0.25
Arsenic	2/2	0.43	0.46	0.45	0.015
Barium	2/2	0.34	0.39	0.37	0.025
Boron	2/2	0.058	0.064	0.061	0.003
Calcium	2/2	4,300	4,500	4,400	100
Chromium	2/2	0.11	0.12	0.12	0.005
Cobalt	1/2	<0.01	0.013	~0.012	0.0015
Copper	2/2	0.25	0.27	0.26	0.01
Iron	2/2	4.3	4.8	4.6	0.25
Lead	2/2	0.042	0.07	0.056	0.014
Lithium	1/2	<0.029	0.056	~0.043	0.014
Magnesium	2/2	290	300	300	5.0
Manganese	2/2	2.0	2.1	2.1	0.05
Mercury	2/2	0.048	0.049	0.049	0.0005
Molybdenum	2/2	0.037	0.04	0.039	0.0015
Nickel	2/2	0.017	0.03	0.024	0.0065
Phosphorous	2/2	3,800	4,000	3,900	100
Potassium	2/2	2,900	3,000	3,000	50
Selenium	2/2	0.88	0.9	0.89	0.01
Silicon	2/2	3.3	3.8	3.6	0.25
Silver	2/2	0.019	0.019	0.019	0.0
Sodium	2/2	540	560	550	10
Strontium	2/2	3.0	3.0	3.0	0.0
Thallium	2/2	0.0058	0.006	0.0059	0.0001

Table 3.1 (continued)

Parameter	N det/ N total	Concentration			Standard error(d)
		Min(b)	Max(b)	Avg(c)	
Titanium	2/2	0.077	0.13	0.1	0.027
Uranium	2/2	0.0013	0.0013	0.0013	0.0
Vanadium	2/2	0.016	0.019	0.018	0.0015
Zinc	2/2	17	17	17	0.0
Pesticides and PCBs (ug/kg)					
4,4'-DDE	2/2	J0.79	J0.92	~0.86	0.065
PCB-1260	2/2	21	27	24	3.0
Radionuclides (pCi/g) (e)					
Alpha activity	2/2	0.052*	0.074*	0.063	0.011
Beta activity	2/2	0.15*	1.7*	0.92	0.77
Potassium-40	2/2	3.0*	3.5*	3.2*	0.26

(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. 2005 tissue concentrations in catfish(a)

Parameter	N det/ N total	Concentration			Standard error(d)
		Min(b)	Max(b)	Avg(c)	
Clinch River downstream from all DOE ORR inputs (CRK 16)					
Metals (mg/kg)					
Aluminum	2/2	0.97	1.1	1.0	0.065
Arsenic	2/2	0.35	0.43	0.39	0.04
Barium	2/2	0.029	0.033	0.031	0.002
Boron	2/2	0.057	0.07	0.064	0.0065
Calcium	2/2	110	160	140	25
Chromium	2/2	0.069	0.083	0.076	0.007
Copper	2/2	0.27	0.28	0.28	0.005
Iron	2/2	3.3	5.4	4.4	1.1
Lithium	1/2	<0.056	0.056	~0.056	0.0
Magnesium	2/2	230	240	240	5.0
Manganese	2/2	0.22	0.26	0.24	0.02
Mercury	2/2	0.17	0.26	0.22	0.045
Molybdenum	2/2	0.026	0.043	0.035	0.0085
Phosphorous	2/2	2,000	2,100	2,100	50
Potassium	2/2	3,200	3,300	3,300	50
Selenium	2/2	0.25	0.29	0.27	0.02
Silicon	2/2	1.3	1.8	1.6	0.25
Silver	1/2	<0.014	0.016	~0.015	0.001
Sodium	2/2	370	390	380	10
Strontium	2/2	0.076	0.12	0.098	0.022
Thallium	2/2	0.0018	0.0023	0.0021	0.00025
Titanium	1/2	<0.0071	0.014	~0.011	0.0035
Uranium	2/2	0.0008	0.0013	0.0011	0.00025
Zinc	2/2	7.0	7.4	7.2	0.2
Pesticides and PCBs (ug/kg)					
4,4'-DDD	2/2	3.5	14	8.8	5.3
4,4'-DDE	2/2	5.4	21	13	7.8
alpha-Chlordane	2/2	2.5	12	7.3	4.8
gamma-Chlordane	2/2	1.8	6.7	4.3	2.5
PCB-1254	2/2	52	200	130	74
PCB-1260	2/2	180	400	290	110
Radionuclides (pCi/g) (e)					
Beta activity	2/2	2.3*	2.5*	2.4*	0.1
Potassium-40	2/2	3.3*	4.6*	4.0	0.66
Clinch River downstream from ORNL (CRK 32)					
Metals (mg/kg)					
Aluminum	2/2	1.1	1.2	1.2	0.05
Arsenic	2/2	0.44	0.45	0.45	0.005
Barium	2/2	0.031	0.038	0.035	0.0035
Boron	2/2	0.056	0.067	0.062	0.0055
Calcium	2/2	75	100	88	13
Chromium	2/2	0.061	0.062	0.062	0.0005
Copper	2/2	0.24	0.28	0.26	0.02
Iron	2/2	3.1	3.2	3.2	0.05
Lead	2/2	0.05	0.8	0.43	0.38
Magnesium	2/2	250	250	250	0.0
Manganese	2/2	0.2	0.24	0.22	0.02
Mercury	2/2	0.1	0.11	0.11	0.005

Table 3.2 (continued)

Parameter	N det/ N total	Concentration			Standard error(d)
		Min(b)	Max(b)	Avg(c)	
Molybdenum	1/2	<0.02	0.039	~0.03	0.0095
Phosphorous	2/2	2,100	2,100	2,100	0.0
Potassium	2/2	3,200	3,300	3,300	50
Selenium	2/2	0.23	0.27	0.25	0.02
Silicon	2/2	1.3	1.5	1.4	0.1
Sodium	2/2	350	360	360	5.0
Strontium	2/2	0.055	0.076	0.066	0.011
Thallium	2/2	0.0023	0.0032	0.0028	0.00045
Uranium	2/2	0.00078	0.0008	0.00079	0.00001
Vanadium	1/2	<0.013	0.015	~0.014	0.001
Zinc	2/2	6.6	7.0	6.8	0.2
Pesticides and PCBs (ug/kg)					
4,4'-DDE	2/2	12	19	16	3.5
alpha-Chlordane	2/2	9.6	13	11	1.7
gamma-Chlordane	2/2	5.2	7.1	6.2	0.95
PCB-1254	2/2	79	110	95	16
PCB-1260	2/2	200	250	230	25
Radionuclides (pCi/g) (e)					
Beta activity	2/2	2.1*	2.5*	2.3*	0.17
Potassium-40	2/2	2.5*	2.8*	2.7*	0.14
Strontium-90	1/2	U0.023	0.18*	~0.1	0.078
Clinch River (Solway Bridge) upstream from all DOE ORR inputs (CRK 70)					
Metals (mg/kg)					
Aluminum	2/2	0.93	0.94	0.94	0.005
Arsenic	2/2	0.37	0.37	0.37	0.0
Barium	2/2	0.017	0.018	0.018	0.0005
Boron	2/2	0.03	0.043	0.037	0.0065
Calcium	2/2	69	76	73	3.5
Chromium	2/2	0.048	0.054	0.051	0.003
Copper	2/2	0.19	0.24	0.22	0.025
Iron	2/2	2.7	2.8	2.8	0.05
Lead	2/2	0.034	0.039	0.037	0.0025
Magnesium	2/2	220	230	230	5.0
Manganese	2/2	0.14	0.15	0.15	0.005
Mercury	2/2	0.053	0.073	0.063	0.01
Molybdenum	1/2	<0.02	0.039	~0.03	0.0095
Phosphorous	2/2	1,900	2,100	2,000	100
Potassium	2/2	3,000	3,300	3,200	150
Selenium	2/2	0.34	0.48	0.41	0.07
Silicon	2/2	1.1	1.3	1.2	0.1
Sodium	2/2	290	410	350	60
Strontium	2/2	0.049	0.054	0.052	0.0025
Thallium	2/2	0.0021	0.0024	0.0023	0.00015
Uranium	2/2	0.0009	0.00098	0.00094	0.00004
Zinc	2/2	5.7	6.1	5.9	0.2
Pesticides and PCBs (ug/kg)					
4,4'-DDD	1/2	U1.6	8.5	~5.1	3.5
4,4'-DDE	2/2	5.4	7.1	6.3	0.85
alpha-Chlordane	2/2	7.5	7.7	7.6	0.1
gamma-Chlordane	2/2	4.0	5.2	4.6	0.6

Table 3.2 (continued)

Parameter	N det/ N total	Concentration			Standard error(d)
		Min(b)	Max(b)	Avg(c)	
PCB-1254	2/2	59	77	68	9.0
PCB-1260	2/2	180	260	220	40
Radionuclides (pCi/g) (e)					
Beta activity	2/2	1.9*	2.0*	1.9*	0.01
Potassium-40	2/2	3.3*	3.6*	3.4*	0.19

(a) All values were included in the calculations. Only parameters that have detections in one or more samples are listed in the table. The sampling and analysis plan contains a complete list of analyses performed.
(b) Prefix "<" indicates the value for a parameter was not quantifiable at the analytical detection limit 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. Concentration of radionuclides detected in raw milk, 2005

Analysis	No. detected/ no. total	Detected concentration (pCi/L)[a,b]			Standard error of mean
		Max	Min	Avg	
		Claxton			
Potassium-40	6/6	1300*	1100*	1300*	37
Total rad Sr	1/6	1.9*	0.39	0.86	0.22
Tritium	2/6	1100*	87	510*	150
		Maryville			
Potassium-40	6/6	1500*	1200*	1400*	46
Total rad Sr	2/6	2.0*	0.2	1.1*	0.28
Tritium	2/6	980*	-180	390	200
		Powell			
Potassium-40	6/6	1300*	1100*	1200*	32
Total rad Sr	1/6	2.2*	0.6	1.3*	0.26
Tritium	2/6	1100*	-60	490*	170

[a]Detected radionuclides are those detected above minimum detectable activity.

[b]Individual and average concentrations significantly greater than zero at the 95% confidence level are identified by an asterisk (*).

Table 3.4. Surface water analyses at ORR Environmental Monitoring Plan surface water locations, 2005(a)

Parameter	N det/ N total	Measured values			Standard error(d)	TWQC(e)
		Min(b)	Max(b)	Avg(c)		
Clinch River downstream from all DOE ORR inputs (CRK 16)						
Field measurements						
Dissolved Oxygen (ppm)	12/12	5.1	10	8.2	0.45	n/a
pH (Std Unit)	12/12	7.8	8.9	n/a	n/a	n/a
Temperature (deg C)	12/12	8.2	24	16	1.5	30.5
Metals (mg/L)						
Aluminum	12/12	0.073	2.1	0.63	0.18	n/a
Antimony	1/12	<0.00028	0.0009	~0.00048	0.000048	0.014
Arsenic	3/12	<0.001	0.0052	~0.0019	0.00036	0.05
Barium	12/12	0.033	0.056	0.04	0.0022	n/a
Beryllium	1/12	<0.00008	<0.0001	~0.000096	0.0000023	n/a
Boron	12/12	0.013	0.019	0.016	0.00054	n/a
Cadmium	2/12	<0.00004	<0.0001	~0.000088	0.0000066	n/a
Calcium	12/12	29	39	35	0.83	n/a
Chromium	6/12	<0.00038	0.0037	~0.0015	0.00027	n/a
Cobalt	12/12	0.00019	0.0012	0.00046	0.000082	n/a
Copper	12/12	0.00086	0.0021	0.0015	0.00014	n/a
Iron	12/12	0.29	2.0	0.75	0.16	n/a
Lead	6/12	0.00035	0.0015	0.00066	0.0001	n/a
Lithium	12/12	0.0017	0.0041	0.0029	0.00017	n/a
Magnesium	12/12	8.2	12	10	0.33	n/a
Manganese	12/12	0.031	0.16	0.068	0.011	n/a
Molybdenum	11/12	<0.0002	0.00081	~0.00055	0.00006	n/a
Nickel	12/12	0.0011	0.0022	0.0016	0.000099	0.61
Phosphorous	11/12	<0.02	0.07	~0.034	0.005	n/a
Potassium	12/12	1.4	2.1	1.7	0.06	n/a
Selenium	4/12	0.0024	0.0032	0.0026	0.000064	n/a
Silver	1/12	<0.00004	<0.0002	~0.00016	0.000021	n/a
Sodium	12/12	2.3	6.6	5.1	0.44	n/a
Strontium	12/12	0.058	0.11	0.091	0.0053	n/a
Sulfur	12/12	2.8	7.6	6.0	0.49	n/a
Thallium	7/12	0.00032	0.00078	0.00047	0.000039	0.0017
Titanium	12/12	0.0023	0.022	0.009	0.0018	n/a
Uranium	12/12	0.00016	0.00038	0.00027	0.000018	n/a
Vanadium	4/12	<0.002	0.0057	~0.0034	0.00047	n/a
Zinc	12/12	0.0027	0.01	0.0064	0.00065	n/a
Zirconium	9/12	<0.0005	0.0025	~0.00099	0.00017	n/a
Radionuclides (pCi/L) (f)						
Alpha activity	1/12	U-0.14	1.8*	~0.66*	0.18	n/a
Beta activity	6/12	U0.087	4.6*	~2.7*	0.38	n/a
Bismuth-214	2/12	0.0	15*	2.2	1.5	24,000
Lead-214	2/12	0.0	18*	2.7	1.8	n/a
Volatile organics (ug/L)						
Acetone	2/12	J1.5	27	~6.5	1.9	n/a
Toluene	1/12	J0.37	U1.0	~0.95	0.053	6,800

Table 3.4 (continued)

Parameter	N det/ N total	Measured values			Standard error(d)	TWQC(e)
		Min(b)	Max(b)	Avg(c)		
Water supply intake for the ETTP (CRK 23)						
Field measurements						
Dissolved Oxygen (ppm)	12/12	5.7	11	8.5	0.51	n/a
pH (Std Unit)	12/12	7.6	8.9	n/a	n/a	n/a
Temperature (deg C)	12/12	9.0	24	16	1.5	30.5
Radionuclides (pCi/L) (f)						
Beta activity	7/12	U0.52	3.4*	~2.5*	0.24	n/a
Bismuth-214	2/12	0.0	12*	1.7	1.2	24,000
Lead-212	1/12	0.0	8.0*	0.67	0.67	120
Lead-214	3/12	0.0	11*	2.0*	1.1	n/a
Potassium-40	1/12	U0.0	51*	~16*	4.6	280
Strontium-89/90	1/12	U-0.6	1.3*	~0.39*	0.18	40
Clinch River (Solway Bridge) upstream from all DOE ORR inputs (CRK 70)						
Field measurements						
Dissolved Oxygen (ppm)	12/12	6.9	12	8.7	0.44	n/a
pH (Std Unit)	12/12	6.3	8.6	n/a	n/a	n/a
Temperature (deg C)	12/12	11	26	17	1.5	30.5
Metals (mg/L)						
Aluminum	12/12	0.066	1.0	0.33	0.078	n/a
Antimony	1/12	<0.00028	0.0011	~0.00049	0.000059	0.014
Arsenic	3/12	<0.001	0.0053	~0.0019	0.00036	0.05
Barium	12/12	E0.032	0.047	~0.037	0.0013	n/a
Boron	12/12	0.011	0.017	0.015	0.00048	n/a
Cadmium	1/12	<0.00004	<0.0001	~0.000086	0.0000072	n/a
Calcium	12/12	35	41	38	0.47	n/a
Chromium	5/12	<0.00038	0.0028	~0.0012	0.0002	n/a
Cobalt	12/12	0.00024	0.00068	0.00036	0.000037	n/a
Copper	12/12	0.0012	0.0062	0.0026	0.00039	n/a
Iron	12/12	0.24	0.87	0.47	0.054	n/a
Lead	4/12	0.0003	0.0014	0.00056	0.00008	n/a
Lithium	12/12	0.0027	0.0043	0.0036	0.00013	n/a
Magnesium	12/12	11	12	11	0.12	n/a
Manganese	12/12	0.034	0.22	0.074	0.014	n/a
Molybdenum	12/12	J0.00038	0.002	~0.00082	0.00013	n/a
Nickel	12/12	0.0011	0.0025	0.0016	0.00012	0.61
Phosphorous	8/12	<0.01	0.048	~0.024	0.0027	n/a
Potassium	12/12	1.4	J1.9	~1.7	0.042	n/a
Selenium	4/12	0.0017	J0.0044	~0.0026	0.00019	n/a
Silver	1/12	<0.00004	<0.0002	~0.00016	0.00002	n/a
Sodium	12/12	5.6	6.8	6.1	0.088	n/a
Strontium	12/12	0.11	0.12	0.11	0.0012	n/a
Sulfur	12/12	7.0	E8.2	~7.4	0.092	n/a
Thallium	3/12	0.0001	<0.0004	~0.00033	0.000035	0.0017
Titanium	10/12	<0.002	0.018	~0.0062	0.0015	n/a
Uranium	12/12	0.00021	0.0003	0.00026	0.0000083	n/a
Vanadium	3/12	<0.002	<0.0054	~0.0033	0.00047	n/a
Zinc	12/12	0.002	0.011	0.006	0.00088	n/a
Zirconium	5/12	<0.00022	0.0021	~0.00064	0.00015	n/a

Table 3.4 (continued)

Parameter	N det/ N total	Measured values			Standard error(d)	TWQC(e)
		Min(b)	Max(b)	Avg(c)		
Radionuclides (pCi/L) (f)						
Beta activity	6/12	U0.6	9.6*	~2.6*	0.68	n/a
Strontium-89/90	1/12	U-0.44	1.8*	~0.42*	0.16	40
Volatile organics (ug/L)						
Acetone	4/12	J1.7	12	~5.5	0.81	n/a
Toluene	1/12	J0.45	U1.0	~0.95	0.046	6,800

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

Table 3.5. Radiological constituents in settleable solids near the ORR, 2005[a]

Event	Co-60	Cs-137	Gross alpha[b]	Gross beta[b]
White Oak Creek Headwaters upstream from ORNL (WOCHW)				
March	*b*	*b*	9.7 ± 8	11 ± 8
July	*b*	*b*	10 ± 7	9.4 ± 6.8
Melton Branch upstream from ORNL (MEK 2.1)				
March	*b*	19 ± 16	6.2 ± 4.8	110 ± 10
July	0.91 ± 0.83	8.5 ± 1.1	5.9 ± 2.3	130 ± 10
White Oak Creek downstream from ORNL (WCK 2.6)				
March	*b*	350 ± 20	15 ± 10	520 ± 40
July	*b*	130 ± 10	15 ± 7	86 ± 13
White Oak Lake at White Oak Dam (WCK 1.0)				
March	*b*	350 ± 10	10 ± 4	250 ± 10
July	*b*	260 ± 10	14 ± 6	130 ± 10

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

4. Y-12 Complex

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

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	365	0.406	0.007	0.05	d	d
pH, Standard Unit	53	7.2	6.7	d	9/ 6(e)	0
Kjeldahl Nitrogen	53	4.16	<1.0	<1.7	d	d
Ammonia as Nitrogen	52	2.94	0.318	1.10	64.8	0

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

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

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	365	6.768	0.019	0.37	d	d
pH, Standard Unit	158	8.1	7.2	d	9/ 6(e)	0
Temperature, deg C	158	23.5	9.4	16	30.5	0
Total Residual Chlorine	158	0.936	<0.05	<0.06	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 Complex Discharge Point 051, OUTFALL 051

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	342	2.629	0.0004	0.5	d	d
pH, Standard Unit	105	7.5	6.6	d	9/ 6(e)	0
Mercury	52	0.0024	0.0008	0.002	d	d

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

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

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	365	0.0554	0.0002	0.005	d	d
pH, Standard Unit	104	8.1	7.0	d	9/ 6(e)	0
Total Residual Chlorine	101	<0.05	<0.05	<0.05	0.5	0
Mercury	104	0.0048	<0.0002	<0.0004	0.004	1

(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 4.5. Y-12 Complex Discharge Point 077, OUTFALL 077

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	12	0.0114	0.0114	0.0114	d	d
pH, Standard Unit	12	8.4	7.6	d	9/ 6(e)	0
Total Residual Chlorine	12	<0.05	<0.05	<0.05	0.5	0

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

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

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	12	1.05	0.173	0.453	d	d
pH, Standard Unit	12	7.2	6.9	d	9/ 6(e)	0
Total Residual Chlorine	12	<0.05	<0.05	<0.05	0.5	0
Mercury	4	0.0003	<0.0002	<0.0002	d	d
Lead	4	0.0002	<0.0002	<0.0002	d	d

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

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

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	343	1.145	0.108	0.213	d	d

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

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

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	157	60.8	0.02	2	d	d
Beryllium	14	<0.0005	<0.0005	<0.0005	d	d
Cadmium	14	<0.01	<0.001	<0.007	d	d
Copper	14	0.0389	0.004	<0.02	d	d
Iron	14	3.96	0.0601	0.576	d	d
Fluoride	12	1.92	0.481	0.945	d	d
Hexane Extractable	157	<6.5	<5.5	<6.1	15	0
Mercury	54	0.0045	0.0009	0.002	d	d
Nitrate/Nitrite as Nitrogen	12	5.86	1.76	4.45	d	d
Lead	14	<0.1	<0.0002	<0.07	d	d
Phosphate as Phosphorus	13	0.566	<0.307	<0.422	d	d
Sulfate	54	265.0	1.28	42.0	d	d
Uranium	54	0.164	0.0044	0.034	d	d
Zinc	14	0.197	0.0253	<0.0723	d	d

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

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

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration						Percentage of DCG	Total Curies
		Max	+/-	Min	+/-	Average	Standard		
Alpha activity (pCi/L)	52	55.0	+/-8.7	-0.14*	+/-4.5	12	1.6	e	3.5E-02
Americium-241 (pCi/L)	52	0.37*	+/-.43	-1.4*	+/-3.3	-0.13	0.055	-0.43	-3.9E-04
Beta activity (pCi/L)	52	34.0	+/-6.6	3.8*	+/-4.6	13	0.96	e	4.0E-02
Cobalt-60 (pCi/L)	52	2.3*	+/-2.4	-3.0*	+/-2.5	0.34	0.16	0.0068	1.0E-03
Cesium-137 (pCi/L)	52	2.0*	+/-2.4	-2.9*	+/-4.1	0.30	0.14	0.010	9.1E-04
Gamma Activity (pCi/L)	52	22.0*	+/-18	-18.0*	+/-18	0.938	1.15	e	2.79E-03
Neptunium-237 (pCi/L)	52	0.26	+/-.2	-0.083*	+/-.096	0.011	0.010	0.036	3.2E-05
Plutonium-238 (pCi/L)	52	0.36	+/-0.26	-0.1*	+/-0.15	0.02	0.01	0.06	7E-05
Plutonium-239/240 (pCi/L)	52	0.1*	+/-0.15	-0.17*	+/-.95	-0.001	0.008	-0.003	-3E-06
Radium-226 (pCi/L)	52	1.7	+/-1.3	-0.38*	+/-0.82	0.26	0.051	0.26	7.8E-04
Radium-228 (pCi/L)	52	1.9*	+/-.93	-0.69*	+/-0.60	0.56	0.089	0.56	1.6E-03
Strontium-89/90 (pCi/L)	52	3.8*	+/-3.4	-3.8*	+/-2.3	0.24	0.17	0.024	7.2E-04
Total Radium Alpha (pCi/L)	52	0.82	+/-.36	-0.18*	+/-0.22	0.2647	0.0294	e	7.9E-04
Technetium-99 (pCi/L)	52	22.0	+/-8.5	-12.0*	+/-9.4	9.1	0.99	0.0091	2.7E-02
Thorium-228 (pCi/L)	52	1.5	+/-.51	-0.2*	+/-.14	0.05	0.04	0.01	1E-04
Thorium-230 (pCi/L)	52	0.43*	+/-0.44	-0.27*	+/-0.5	0.035	0.025	0.012	1.0E-04
Thorium-232 (pCi/L)	52	0.066*	+/-0.12	-0.037*	+/-.064	0.0035	0.0036	0.0071	1.0E-05
Thorium-234 (pCi/L)	52	46.0	+/-4.6	1.4	+/-0.43	11	1.4	0.11	3.2E-02
Tritium (pCi/L)	52	1100.0	+/-540	-520.0*	+/-520	302.1	47.036	0.01510	8.980E-01
Uranium-234 (pCi/L)	52	8.9	+/-1.2	0.92	+/-0.48	3.4	0.27	0.68	1.0E-02
Uranium-235 (pCi/L)	52	0.75	+/-.28	-0.017*	+/-.034	0.19	0.023	0.031	5.5E-04
Uranium-236 (pCi/L)	50	0.27	+/-.16	-0.016*	+/-0.064	0.064	0.0093	0.013	1.9E-04
Uranium-238 (pCi/L)	52	46.0	+/-4.6	1.4	+/-0.43	11	1.4	1.8	3.2E-02

(e) Not applicable
* Provisional Result

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

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
96-Hour Toxicity Test	5	>100.0	>100.0	>100.0	d/ 100(e)	0
			With Ceriodaphnia			
96-Hour Toxicity Test	4	>100.0	>100.0	>100.0	d/ 100(e)	0
			With Fathead minnows			
NOEC, With Ceriodaphnia	5	100.0	80.0	96.0	d/ 100(e)	0
NOEC, With Fathead minnows	4	100.0	100.0	100.0	d/ 100(e)	0
pH, Standard Unit	156	8.3	7.2	d	8.5/ 6.5(e)	0
Temperature, deg C	156	24.6	8.3	16	30.5	0
Total Residual Chlorine	157	0.231	<0.05	<0.05	0.019	0
Suspended Solids	52	109.0	<1.0	<6.4	d	d

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

Table 4.11. Y-12 Complex Discharge Point 501, CENTRAL POLLUTION CONTROL FACILITY

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
48-Hour Toxicity Test	1	>100.0	>100.0	>100.0	d	d
With Ceriodaphnia						
Flow, mgd	1	0.0107	0.0107	0.0107	d	d
pH, Standard Unit	1	6.9	6.9	d	9/ 6(e)	0
TEMPERATURE, deg C	1	24.9	24.9	24.9	d	d
Silver	1	<0.0004	<0.0004	<0.0004	0.05	0
Boron	1	0.85	0.85	0.85	d	d
Beryllium	1	<0.0002	<0.0002	<0.0002	d	d
Calcium	1	770.0	770.0	770.0	d	d
Cadmium	1	<0.001	<0.001	<0.001	0.15	0
Chloride	1	36.4	36.4	36.4	d	d
Chromium	1	<0.004	<0.004	<0.004	1	0
Copper	1	0.0115	0.0115	0.0115	1	0
Cyanide	1	<0.01	<0.01	<0.01	1.2	0
Iron	1	0.0755	0.0755	0.0755	d	d
Fluoride	1	0.311	0.311	0.311	d	d
Hexane Extractable	1	<6.4	<6.4	<6.4	15	0
Mercury	1	<0.0002	<0.0002	<0.0002	d	d
Potassium	1	20.4	20.4	20.4	d	d
Lithium	1	1.67	1.67	1.67	d	d
Magnesium	1	1.66	1.66	1.66	d	d
Sodium	1	25.2	25.2	25.2	d	d
Nickel	1	0.0805	0.0805	0.0805	3.98	0
Nitrate/Nitrite as Nitrogen	1	0.864	0.864	0.864	100	0
Lead	1	0.0008	0.0008	0.0008	0.2	0
PCB, Total	1	0.0005	0.0005	0.0005	0.001	0
Phosphate as Phosphorus	1	<0.307	<0.307	<0.307	d	d
Sulfate	1	1660.0	1660.0	1660.0	d	d

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

Table 4.12. Y-12 Complex Discharge Point 501, CENTRAL POLLUTION CONTROL FACILITY

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Surfactant	1	<0.1	<0.1	<0.1	d	d
Suspended Solids	1	<1.0	<1.0	<1.0	40	0
Sum of TTO Analysis	1	<0.01	<0.01	<0.01	2.13	0
Uranium	2	0.001	0.0005	0.0007	d	d
Zinc	1	0.0153	0.0153	0.0153	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 4.13. Y-12 Complex Discharge Point 501, CENTRAL POLLUTION CONTROL FACILITY

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration						Percentage of DCG	Total Curies
		Max	+/-	Min	+/-	Average	Standard		
Alpha activity (pCi/L)	1	0.89*	+/-14	0.89*	+/-14	0.89		e	1.3E-05
Americium-241 (pCi/L)	1	-1.2*	+/-3.2	-1.2*	+/-3.2	-1.2		-4.0	-1.8E-05
Beta activity (pCi/L)	1	8.2*	+/-17	8.2*	+/-17	8.2		e	1.2E-04
Cobalt-60 (pCi/L)	1	-0.11*	+/-2.5	-0.11*	+/-2.5	-0.11		-0.0022	-1.6E-06
Cesium-137 (pCi/L)	1	1.7*	+/-2.5	1.7*	+/-2.5	1.7		0.057	2.5E-05
Gamma Activity (pCi/L)	1	5.3*	+/-17	5.3*	+/-17	5.3		e	7.8E-05
Neptunium-237 (pCi/L)	1	0.036*	+/-.1	0.036*	+/-.1	0.036		0.12	5.3E-07
Plutonium-238 (pCi/L)	1	-0.055*	+/-.19	-0.055*	+/-.19	-0.055		-0.14	-8.1E-07
Plutonium-239/240 (pCi/L)	1	0.018*	+/-.38	0.018*	+/-.38	0.018		0.060	2.7E-07
Radium-226 (pCi/L)	1	0.35*	+/-.31	0.35*	+/-.31	0.35		0.35	5.2E-06
Radium-228 (pCi/L)	1	0.56*	+/-.74	0.56*	+/-.74	0.56		0.56	8.3E-06
Strontium-89/90 (pCi/L)	1	6.0	+/-3.7	6.0	+/-3.7	6.0		0.60	8.9E-05
Total Radium Alpha (pCi/L)	1	0.57	+/-.32	0.57	+/-.32	0.57		e	8.4E-06
Technetium-99 (pCi/L)	1	10.0*	+/-8.2	10.0*	+/-8.2	10.0		0.0100	1.48E-04
Thorium-228 (pCi/L)	1	0.022*	+/-.2	0.022*	+/-.2	0.022		0.0055	3.3E-07
Thorium-230 (pCi/L)	1	-0.24*	+/-.34	-0.24*	+/-.34	-0.24		-0.080	-3.6E-06
Thorium-232 (pCi/L)	1	0.0*	+/-.04	0.0*	+/-.04	0.0		0.0	0.0E+00
Thorium-234 (pCi/L)	1	0.18*	+/-.22	0.18*	+/-.22	0.18		0.0018	2.7E-06
Tritium (pCi/L)	1	-780.0*	+/-530	-780.0*	+/-530	-780.0		-0.03900	-1.15E-02
Uranium-234 (pCi/L)	1	0.41*	+/-.36	0.41*	+/-.36	0.41		0.082	6.1E-06
Uranium-235 (pCi/L)	1	-0.053*	+/-.15	-0.053*	+/-.15	-0.053		-0.0088	-7.8E-07
Uranium-236 (pCi/L)	1	0.0013*	+/-.063	0.0013*	+/-.063	0.0013		0.00030	1.9E-08
Uranium-238 (pCi/L)	1	0.18*	+/-.22	0.18*	+/-.22	0.18		0.030	2.7E-06

(e) Not applicable
* Provisional Result

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

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
48 HOUR TOX TEST	2	44.6	42.4	43.5	d	d
Flow, mgd	24	0.067	0.006	0.04	d	d
pH, Std Unit	15	8.0	6.3	d	9/ 6(e)	0
TEMPERATURE, deg C	15	27.2	7.7	20	d	d
Silver	15	<0.0004	<0.0004	<0.0004	0.05	0
Arsenic	15	<1.0	0.0057	<0.34	d	d
Boron	15	22.7	16.5	19.8	d	d
Beryllium	15	<0.0025	<0.0025	<0.0025	d	d
Calcium	15	94.6	17.2	46.8	d	d
Cadmium	15	0.0022	<0.001	<0.002	0.15	0
Chloride	15	551.0	329.0	457.1	d	d
Chromium	15	<0.1	<0.004	<0.03	1	0
Copper	15	<0.1	0.0157	<0.06	1	0
Cyanide	15	0.0185	<0.005	<0.007	1.2	0
Iron	15	1.6	0.295	0.79	d	d
Fluoride	5	3.25	1.02	2.37	d	d
Hexane Extractable	15	<6.4	<5.5	<5.8	15	0
Mercury	15	<0.0002	<0.0002	<0.0002	d	d
Potassium	15	114.0	64.0	83.2	d	d
Lithium	15	2.73	2.12	2.45	d	d
Magnesium	15	5.48	4.21	4.67	d	d
Manganese	15	0.0876	0.0348	0.0617	d	d
Sodium	15	3180.0	2590.0	2930.7	d	d
Nickel	15	0.774	0.255	0.554	3.98	0
Nitrate/Nitrite as Nitrogen	15	30.3	9.18	18.6	150	0
Lead	15	0.0013	<0.0002	<0.0006	0.2	0
PCB, Total	3	<0.0005	<0.0005	<0.0005	0.001	0

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

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

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Phosphate as Phosphorus	15	8.74	2.78	6.18	d	d
Selenium	15	<1.0	0.0936	<0.64	d	d
Sulfate	15	5950.0	5310.0	5666.0	d	d
Suspended Solids	15	13.1	1.0	4.3	40	0
Sum of TTO Analysis	3	0.02	0.0	0.01	2.13	0
Uranium	11	0.016	0.0056	0.011	d	d
Zinc	15	0.99	0.066	<0.32	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 4.16. Y-12 Complex Discharge Point 502, WEST END TREATMENT FACILITY

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	5	58.0*	+/-42	-21.0*	+/-30	12.4	14.3	e	6.75E-04
Americium-241 (pCi/L)	5	0.071*	+/-0.3	-0.3*	+/-0.27	-0.07	0.08	-0.2	-4E-06
Beta activity (pCi/L)	5	330.0	+/-76	140.0	+/-50	212.0	33.97	e	1.150E-02
Cobalt-60 (pCi/L)	5	0.92*	+/-2.5	0.0032*	+/-2.2	0.52	0.19	0.010	2.8E-05
Cesium-137 (pCi/L)	5	31.0	+/-5.2	28.0	+/-4.5	29.4	0.510	0.980	1.60E-03
Gamma Activity (pCi/L)	5	36.0	+/-19	11.0*	+/-18	23.8	4.82	e	1.30E-03
Neptunium-237 (pCi/L)	5	0.14*	+/-0.22	-0.056*	+/-0.13	0.022	0.039	0.075	1.2E-06
Plutonium-238 (pCi/L)	5	0.11*	+/-0.18	0.0*	+/-0.14	0.033	0.020	0.082	1.8E-06
Plutonium-239/240 (pCi/L)	5	0.074*	+/-0.13	-0.0049*	+/-0.15	0.025	0.015	0.085	1.4E-06
Radium-226 (pCi/L)	5	0.44*	+/-0.46	-0.029*	+/-0.044	0.23	0.085	0.23	1.2E-05
Radium-228 (pCi/L)	5	1.9	+/-0.97	-0.38*	+/-0.80	0.39	0.41	0.39	2.1E-05
Strontium-89/90 (pCi/L)	5	8.46	+/-5.3	-0.72*	+/-2.7	4.0	1.7	0.40	2.2E-04
Total Radium Alpha (pCi/L)	5	0.5	+/-0.32	0.31*	+/-0.26	0.4	0.03	e	2E-05
Technetium-99 (pCi/L)	5	420.0	+/-14	47.0	+/-10	258	85.3	0.258	1.40E-02
Thorium-228 (pCi/L)	5	0.46*	+/-0.32	-0.15*	+/-0.29	0.059	0.11	0.015	3.2E-06
Thorium-230 (pCi/L)	5	0.2*	+/-0.44	-0.072*	+/-0.52	0.06	0.04	0.02	3E-06
Thorium-232 (pCi/L)	5	0.04*	+/-0.092	-0.069*	+/-0.089	-0.004	0.02	-0.008	-2E-07
Thorium-234 (pCi/L)	5	5.4	+/-0.97	1.5	+/-0.48	2.7	0.71	0.027	1.5E-04
Tritium (pCi/L)	5	11000.0	+/-790	9500.0	+/-770	10300	300.0	0.51500	5.6100E-01
Uranium-234 (pCi/L)	5	1.7	+/-0.61	0.59	+/-0.33	1.1	0.20	0.21	5.7E-05
Uranium-235 (pCi/L)	5	0.067*	+/-0.18	-0.043*	+/-0.091	0.029	0.020	0.0048	1.6E-06
Uranium-236 (pCi/L)	5	0.068*	+/-0.092	-0.0054*	+/-0.042	0.029	0.013	0.0058	1.6E-06
Uranium-238 (pCi/L)	5	5.4	+/-0.97	1.5	+/-0.48	2.7	0.71	0.45	1.5E-04

(e) Not applicable
* Provisional Result

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

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
48-Hour Toxicity Test With Ceriodaphnia	4	>100.0	61.42	>88.80	d	d
Flow, mgd	188	0.037	0.002	0.01	d	d
pH, Std Unit	121	8.3	7.2	d	9/ 6(e)	0
Copper	120	<0.02	<0.02	<0.02	d	d
Iron	120	0.512	<0.05	<0.06	1	0
Manganese	120	2.87	0.0189	0.266	d	d
Lead	120	<0.1	<0.1	<0.1	d	d
PCB, Total	12	<0.0005	<0.0005	<0.0005	0.001	0
Uranium	40	0.075	0.013	0.029	d	d

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

Table 4.18. Y-12 Complex Discharge Point 512, OUTFALL 512 (GWTF)

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	40	25.0	+/-7.2	0.1*	+/-4.2	10	1	e	2E-04
Americium-241 (pCi/L)	40	0.39	+/-.28	-1.5*	+/-3.5	-0.15	0.067	-0.50	-3.0E-06
Beta activity (pCi/L)	40	24.0	+/-6.6	3.6*	+/-5	11	0.62	e	2.2E-04
Cobalt-60 (pCi/L)	40	2.3*	+/-1.7	-2.0*	+/-2.3	0.66	0.16	0.013	1.3E-05
Cesium-137 (pCi/L)	40	2.5*	+/-2.3	-1.9*	+/-2.3	0.27	0.14	0.0089	5.3E-06
Gamma Activity (pCi/L)	40	21.0*	+/-18	-18.0*	+/-16	-0.443	1.18	e	-8.79E-06
Neptunium-237 (pCi/L)	40	0.15*	+/-.15	-0.094*	+/-.14	0.0026	0.0070	0.0085	5.0E-08
Plutonium-238 (pCi/L)	40	0.16	+/-.14	-0.091*	+/-.096	0.018	0.0097	0.046	3.7E-07
Plutonium-239/240 (pCi/L)	40	0.15*	+/-0.22	-0.17*	+/-.56	-0.015	0.0092	-0.051	-3.0E-07
Radium-226 (pCi/L)	40	0.83	+/-2.4	-0.51*	+/-0.75	0.22	0.052	0.22	4.4E-06
Radium-228 (pCi/L)	40	2.7	+/-1.2	-0.64*	+/-.86	0.57	0.090	0.57	1.1E-05
Strontium-89/90 (pCi/L)	40	4.4	+/-2.1	-2.5*	+/-1.8	0.65	0.20	0.065	1.3E-05
Total Radium Alpha (pCi/L)	40	1.1	+/-0.40	-0.076*	+/-.21	0.48	0.038	e	9.5E-06
Technetium-99 (pCi/L)	40	11.0*	+/-8.0	-17.0*	+/-7.6	2.40	0.844	0.00240	4.76E-05
Thorium-228 (pCi/L)	40	0.2*	+/-.23	-0.14*	+/-.16	0.0006	0.01	0.0001	1E-08
Thorium-230 (pCi/L)	40	0.44	+/-.29	-0.23*	+/-.34	0.028	0.028	0.0093	5.5E-07
Thorium-232 (pCi/L)	40	0.078*	+/-.11	-0.064*	+/-.065	0.0010	0.0046	0.0020	2.0E-08
Thorium-234 (pCi/L)	40	24.0	+/-2.6	4.2	+/-0.82	8.9	0.70	0.089	1.8E-04
Tritium (pCi/L)	40	1500.0	+/-610	200.0*	+/-560	966.2	44.94	0.04830	1.920E-02
Uranium-234 (pCi/L)	40	5.0	+/-.79	1.1	+/-.36	2.1	0.14	0.42	4.2E-05
Uranium-235 (pCi/L)	40	0.36	+/-.23	-0.019*	+/-0.13	0.15	0.015	0.024	2.9E-06
Uranium-236 (pCi/L)	38	0.15	+/-0.14	-0.022*	+/-0.045	0.038	0.0063	0.0075	7.5E-07
Uranium-238 (pCi/L)	40	24.0	+/-2.6	4.2	+/-0.82	8.9	0.70	1.5	1.8E-04

(e) Not applicable
* Provisional Result

Table 4.19. Y-12 Complex Discharge Point 520, OUTFALL 520

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration			Reference Value(b)	Number of Values Exceeding Reference
		Max	Min	Avg		
pH, Standard Unit	18	7.8	6.3	d	9/ 6(e)	0
Dissolved Solids	18	148.0	<1.0	<35	d	d
Uranium	7	<0.001	<0.001	<0.001	d	d

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

Table 4.20. Y-12 Complex Discharge Point 520, OUTFALL 520

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	7	1.0*	+/-2.2	-2.4*	+/-1.9	-0.32	0.51	e	e
Americium-241 (pCi/L)	7	0.17*	+/-.23	-0.25*	+/-0.26	-0.071	0.062	-0.24	e
Beta activity (pCi/L)	7	3.5*	+/-4.5	-5.8*	+/-4.7	-0.65	1.2	e	e
Cobalt-60 (pCi/L)	7	1.4*	+/-2	-1.1*	+/-1.8	0.64	0.32	0.013	e
Cesium-137 (pCi/L)	7	1.8*	+/-2.1	-0.061*	+/-2.3	0.93	0.28	0.031	e
Gamma Activity (pCi/L)	7	11.0*	+/-17	-16.0*	+/-17	1.44	4.07	e	e
Neptunium-237 (pCi/L)	7	0.091*	+/-.11	-0.061*	+/-0.16	-0.0045	0.020	-0.015	e
Plutonium-238 (pCi/L)	7	0.21*	+/-.22	-0.088*	+/-0.19	0.0069	0.038	0.017	e
Plutonium-239/240 (pCi/L)	7	0.079*	+/-0.13	-0.059*	+/-.066	0.014	0.019	0.046	e
Radium-226 (pCi/L)	7	0.54	+/-1.1	-0.24*	+/-0.42	0.11	0.10	0.11	e
Radium-228 (pCi/L)	7	0.73*	+/-0.56	-0.26*	+/-.62	0.078	0.13	0.078	e
Strontium-89/90 (pCi/L)	7	2.0*	+/-2.2	-2.0*	+/-1.8	0.37	0.46	0.037	e
Total Radium Alpha (pCi/L)	7	451.0	+/-16	-0.02*	+/-.12	60	60	e	e
Technetium-99 (pCi/L)	7	13.0	+/-8.1	-7.2*	+/-8.2	2.3	2.5	0.0023	e
Thorium-228 (pCi/L)	7	0.095*	+/-0.28	-0.12*	+/-.12	-0.036	0.028	-0.0089	e
Thorium-230 (pCi/L)	7	0.15*	+/-0.36	-0.26*	+/-.36	-0.049	0.047	-0.016	e
Thorium-232 (pCi/L)	7	0.04*	+/-0.092	-0.022*	+/-0.072	0.0007	0.007	0.001	e
Thorium-234 (pCi/L)	7	0.045*	+/-.09	-0.029*	+/-0.15	0.0056	0.011	0.00010	e
Tritium (pCi/L)	7	5200.0	+/-670	-350.0*	+/-520	1750	826.7	0.0875	e
Uranium-234 (pCi/L)	7	0.026*	+/-0.31	-0.1*	+/-0.37	-0.03	0.02	-0.005	e
Uranium-235 (pCi/L)	7	0.042*	+/-0.14	-0.089*	+/-.15	-0.019	0.019	-0.0032	e
Uranium-238 (pCi/L)	7	0.045*	+/-.09	-0.029*	+/-0.15	0.0056	0.011	0.00090	e

(e) Not applicable
* Provisional Result

Table 4.21. Y-12 Complex Discharge Point 550, OUTFALL 550

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	365	0.038	0.004	0.01	d	d
pH, Standard Unit	52	7.8	6.9	d	9/ 6(e)	0
Mercury	52	0.001	<0.0002	<0.0004	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 4.22. Y-12 Complex Discharge Point 551, CENTRAL MERCURY TREATMENT UNIT

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	252	0.0534	0.002	0.01	d	d
pH, Std Unit	46	8.2	6.8	d	9/ 6(e)	0
Mercury	46	0.0086	<0.0002	<0.0008	0.004	6
Uranium	12	0.025	0.0018	0.011	d	d

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

Table 4.23. Y-12 Complex Discharge Point 551, CENTRAL MERCURY TREATMENT UNIT

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	12	17.0	+/-9.5	-15.0*	+/-15	3.73	2.18	e	5.43E-05
Americium-241 (pCi/L)	12	0.09*	+/-0.31	-0.85*	+/-4.3	-0.09	0.08	-0.3	-1E-06
Beta activity (pCi/L)	12	240.0	+/-19	4.8*	+/-4	120	22	e	1.8E-03
Cobalt-60 (pCi/L)	12	1.5*	+/-2.2	-1.7*	+/-2.1	0.41	0.24	0.0082	6.0E-06
Cesium-137 (pCi/L)	12	3.1*	+/-2.3	-3.3*	+/-4.2	0.77	0.50	0.026	1.1E-05
Gamma Activity (pCi/L)	12	12.0*	+/-18	-16.0*	+/-18	-0.737	2.26	e	-1.07E-05
Neptunium-237 (pCi/L)	12	0.19*	+/-.24	-0.11*	+/-.037	0.016	0.022	0.052	2.3E-07
Plutonium-238 (pCi/L)	12	0.19	+/-.14	-0.043*	+/-.25	0.038	0.018	0.094	5.4E-07
Plutonium-239/240 (pCi/L)	12	0.055*	+/-0.12	-0.13*	+/-0.14	-0.019	0.017	-0.062	-2.7E-07
Radium-226 (pCi/L)	12	1.4	+/-0.93	-0.32*	+/-.25	0.40	0.15	0.40	5.8E-06
Radium-228 (pCi/L)	12	3.2*	+/-1.7	-0.22*	+/-1.6	0.91	0.28	0.91	1.3E-05
Strontium-89/90 (pCi/L)	12	2.1*	+/-2	-0.43*	+/-1.4	0.81	0.20	0.081	1.2E-05
Total Radium Alpha (pCi/L)	12	2.5	+/-0.88	0.17*	+/-0.20	1.1	0.19	e	1.6E-05
Technetium-99 (pCi/L)	12	330.0	+/-13	2.7*	+/-8.7	170	33	0.17	2.5E-03
Thorium-228 (pCi/L)	12	0.086*	+/-.3	-0.089*	+/-.11	-0.013	0.013	-0.0033	-1.9E-07
Thorium-230 (pCi/L)	12	0.26	+/-.19	-0.2*	+/-0.38	0.04	0.05	0.01	6E-07
Thorium-232 (pCi/L)	12	0.024*	+/-0.076	-0.014*	+/-0.053	0.0036	0.0033	0.0072	5.2E-08
Thorium-234 (pCi/L)	12	8.0	+/-1.1	0.4	+/-0.25	3	0.7	0.03	5E-05
Tritium (pCi/L)	12	640.0*	+/-620	-450.0*	+/-510	175.5	81.36	0.008800	2.550E-03
Uranium-234 (pCi/L)	12	5.0	+/-0.88	0.16*	+/-0.39	2.0	0.43	0.40	2.9E-05
Uranium-235 (pCi/L)	12	0.31	+/-.22	-0.046*	+/-0.19	0.077	0.028	0.013	1.1E-06
Uranium-236 (pCi/L)	11	0.078*	+/-0.1	-0.021*	+/-0.046	0.0083	0.0080	0.0017	1.2E-07
Uranium-238 (pCi/L)	12	8.0	+/-1.1	0.4	+/-0.25	3	0.7	0.6	5E-05

(e) Not applicable
* Provisional Result

Table 4.24. Y-12 Complex Category I Outfalls
From: 2005/01/01 To: 2005/12/31

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
003	Flow, mgd	2	0.0457	0.0095	0.0276	d	d
	pH, Standard Units	2	7.7	7.3	d	9/ 4(e)	0
006	Flow, mgd	2	0.2736	0.0171	0.145	d	d
	pH, Standard Units	2	8.0	7.6	d	9/ 4(e)	0
007	Flow, mgd	2	0.2964	0.0438	0.1017	d	d
	pH, Standard Units	2	8.0	7.8	d	9/ 4(e)	0
008	Flow, mgd	2	0.0011	0.0002	0.0007	d	d
	pH, Standard Units	2	7.8	7.3	d	9/ 4(e)	0
009	Flow, mgd	2	0.0008	0.0004	0.0006	d	d
	pH, Standard Units	2	8.1	7.9	d	9/ 4(e)	0
011	Flow, mgd	2	0.0002	0.0002	0.0002	d	d
	pH, Standard Units	2	7.9	7.7	d	9/ 4(e)	0
015	Outfall closed						
018	Outfall closed						
032	Outfall was eliminated						
033	Flow, mgd	2	0.019	0.0023	0.011	d	d
	pH, Standard Units	2	7.9	7.5	d	9/ 4(e)	0
045	Flow, mgd	3	1.06	0.0002	0.4	d	d
	pH, Standard Units	3	8.2	7.9	d	9/ 4(e)	0
046	Flow, mgd	3	0.0693	0.0008	0.03	d	d
	pH, Standard Units	3	8.5	7.6	d	9/ 4(e)	0
058	Flow, mgd	2	0.019	0.0038	0.011	d	d
	pH, Standard Units	2	8.3	8.3	d	9/ 4(e)	0
062	Flow, mgd	2	0.0046	0.0011	0.0029	d	d
	pH, Standard Units	2	7.7	7.6	d	9/ 4(e)	0

Table 4.24. (continued)

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
086	Flow, mgd	2	0.0023	0.0004	0.001	d	d
	pH, Standard Units	2	8.0	7.7	d	9/ 4(e)	0
087	Flow, mgd	2	0.0457	0.0046	0.025	d	d
	pH, Standard Units	2	8.9	8.8	d	9/ 4(e)	0
098	Outfall eliminated						
110	Flow, mgd	2	0.0137	0.0046	0.0091	d	d
	pH, Standard Units	2	8.1	7.8	d	9/ 4(e)	0
134	Flow, mgd	2	0.0008	0.0004	0.0006	d	d
	pH, Standard Units	2	8.3	8.3	d	9/ 4(e)	0
213	This outfall has been eliminated.						
S01	Flow, mgd	2	0.0095	0.0076	0.0086	d	d
	pH, Standard Units	2	7.8	7.4	d	9/ 4(e)	0
S03	Flow, mgd	1	0.0228	0.0228	0.0228	d	d
	pH, Standard Units	1	7.9	7.9	d	9/ 4(e)	0
S04	Flow, mgd	2	0.0266	0.0008	0.01	d	d
	pH, Standard Units	2	8.1	7.8	d	9/ 4(e)	0
S06	Flow, mgd	366	3.0029	0.0002	0.2	d	d
	pH, Standard Units	3	7.34	7.3	d	9/ 4(e)	0
S07	Flow, mgd	315	2.5921	0.0002	0.2	d	d
	pH, Standard Units	2	7.9	7.5	d	9/ 4(e)	0
S09	Flow, mgd	2	0.0438	0.0038	0.024	d	d
	pH, Standard Units	2	7.3	7.3	d	9/ 4(e)	0
S15	Flow, mgd	2	0.0057	0.006	0.003	d	d
	pH, Standard Units	2	7.9	7.7	d	10/ 6(e)	0
S16	Flow, mgd	2	0.0495	0.0076	0.028	d	d
	pH, Standard Units	2	8.1	7.1	d	10/ 6(e)	0

Table 4.24. (continued)

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
S18	Flow, mgd	2	1.14	0.1902	0.665	d	d
	pH, Standard Units	2	8.1	7.4	d	9/ 4(e)	0

Table 4.25. Y-12 Complex Category II Outfalls

From: 2005/01/01 To: 2005/12/31

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
004	Flow, mgd	4	0.144	0.0072	0.079	d	d
	pH, Standard Units	4	7.9	7.2	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
010	Flow, mgd	4	0.072	0.0144	0.047	d	d
	pH, Standard Units	4	8.2	7.0	d	9/ 4(e)	0
	Total Residual Chlorine	4	0.1	<0.05	<0.06	0.5	0
014	Flow, mgd	4	0.288	0.0002	0.1	d	d
	pH, Standard Units	4	7.8	7.3	d	9/ 4(e)	0
	Total Residual Chlorine	4	0.38	<0.05	<0.1	0.5	0
016	Flow, mgd	4	0.0864	0.0015	0.040	d	d
	pH, Standard Units	4	7.8	6.9	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
019	Flow, mgd	4	0.0432	0.0015	0.014	d	d
	pH, Standard Units	4	8.2	7.3	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
020	Flow, mgd	4	0.0576	0.0015	0.016	d	d
	pH, Standard Units	4	7.9	7.1	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
041	Flow, mgd	4	0.0038	0.0002	0.002	d	d
	pH, Standard Units	4	7.7	7.1	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
044	Flow, mgd	4	0.0288	0.0004	0.009	d	d
	pH, Standard Units	4	7.7	7.2	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0

Table 4.25. (continued)

Outfall	Parameter	Number of Samples	Concentration(a) Max	Concentration(a) Min	Concentration(a) Avg	Reference Value(b)	Number of Values Exceeding Reference
057	Flow, mgd	4	0.0144	0.0002	0.005	d	d
	pH, Standard Units	4	7.7	6.8	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
063	Flow, mgd	4	0.0288	0.0004	0.01	d	d
	pH, Standard Units	4	7.7	7.0	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
064	Flow, mgd	6	0.2683	0.0002	0.06	d	d
	pH, Standard Units	6	7.9	7.2	d	9/ 4(e)	0
	Total Residual Chlorine	5	<0.05	<0.05	<0.05	0.5	0
067	Flow, mgd	4	0.144	0.003	0.06	d	d
	pH, Standard Units	4	8.1	6.8	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
083	Flow, mgd	4	0.0288	0.0002	0.008	d	d
	pH, Standard Units	4	7.6	6.9	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
088	Flow, mgd	4	0.0038	0.0002	0.002	d	d
	pH, Standard Units	4	7.7	7.0	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
099	Flow, mgd	4	0.0576	0.0004	0.02	d	d
	pH, Standard Units	4	8.0	7.1	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
102	Flow, mgd	5	0.15	0.0038	0.048	d	d
	pH, Standard Units	5	7.9	6.7	d	9/ 4(e)	0
	Total Residual Chlorine	5	<0.05	<0.05	<0.05	0.5	0

Table 4.25. (continued)

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
126	Flow, mgd	4	0.0228	0.0003	0.006	d	d
	pH, Standard Units	4	7.8	7.1	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
S02	Flow, mgd	5	0.36	0.040	0.25	d	d
	pH, Standard Units	8	8.53	7.1	d	9/ 4(e)	0
	Total Residual Chlorine	5	0.09	<0.05	<0.06	0.5	0
S08	Flow, mgd	324	2.3397	0.0002	0.07	d	d
	pH, Standard Units	7	8.92	7.3	d	9/ 4(e)	0
S10	Flow, mgd	4	2.60678	0.0007	0.9	d	d
	pH, Standard Units	4	7.8	7.1	d	9/ 4(e)	0
S11	Flow, mgd	4	1.4544	0.0107	0.449	d	d
	pH, Standard Units	5	7.9	7.2	d	9/ 4(e)	0
S12	Flow, mgd	4	0.0114	0.0001	0.006	d	d
	pH, Standard Units	4	7.6	7.0	d	9/ 4(e)	0
S13	Flow, mgd	4	1.7251	0.016	0.60	d	d
	pH, Standard Units	5	8.04	7.1	d	9/ 4(e)	0
S17	Flow, mgd	6	12.6662	0.12	3.1	d	d
	pH, Standard Units	5	7.8	6.7	d	9/ 4(e)	0
S20	Flow, mgd	4	0.288	0.0288	0.166	d	d
	pH, Standard Units	4	7.4	6.8	d	9/ 4(e)	0
S21	Outfall eliminated						
S22	Flow, mgd	4	0.0864	0.0011	0.032	d	d
	pH, Standard Units	4	7.8	7.2	d	10/ 6(e)	0

Table 4.25. (continued)

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
S24	Flow, mgd	361	57.5555	0.0002	1	d	d
	pH, Standard Units	6	7.8	7.1	d	9/ 4(e)	0
S25	Flow, mgd	4	0.36	0.0864	0.17	d	d
	pH, Standard Units	4	7.6	6.9	d	10/ 6(e)	0
S26	Flow, mgd	4	0.144	0.0144	0.0576	d	d
	pH, Standard Units	4	7.6	7.0	d	10/ 6(e)	0
S27	Flow, mgd	4	0.288	0.144	0.234	d	d
	pH, Standard Units	4	7.8	7.1	d	10/ 6(e)	0
S28	Flow, mgd	4	0.216	0.0432	0.108	d	d
	pH, Standard Units	4	7.6	6.9	d	10/ 6(e)	0
S29	Flow, mgd	4	0.432	0.0144	0.194	d	d
	pH, Standard Units	4	7.8	7.5	d	10/ 6(e)	0

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

Table 4.26. Y-12 Complex Category III Outfalls

From: 2005/01/01 To: 2005/12/31

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
002	Flow, mgd	12	0.0609	0.0114	0.0313	d	d
	pH, Standard Units	12	7.8	7.4	d	9/ 4(e)	0
	Total Residual Chlorine	12	<0.05	<0.05	<0.05	0.5	0
034	Flow, mgd	13	0.6957	0.0571	0.160	d	d
	pH, Standard Units	13	7.7	7.4	d	9/ 4(e)	0
	Total Residual Chlorine	12	<0.05	<0.05	<0.08	0.5	0
042	Flow, mgd	14	0.0183	0.000038	0.0050	d	d
	pH, Standard Units	14	8.3	7.5	d	9/ 4(e)	0
	Total Residual Chlorine	13	<0.05	<0.05	<0.05	0.5	0
047	Flow, mgd	12	0.0137	0.0091	0.0099	d	d
	pH, Standard Units	13	7.9	7.4	d	9/ 4(e)	0
	Total Residual Chlorine	12	<0.05	<0.05	<0.05	0.5	0
048	Flow, mgd	11	0.0183	0.0004	0.003	d	d
	pH, Standard Units	11	7.9	7.3	d	9/ 4(e)	0
	Total Residual Chlorine	11	<0.05	<0.05	<0.05	0.5	0
054	Flow, mgd	14	0.022	0.000038	0.0032	d	d
	pH, Standard Units	15	8.2	6.9	d	9/ 4(e)	0
	Total Residual Chlorine	12	<0.05	<0.05	<0.05	0.5	0
071	Flow, mgd		12	0.0639	0.0023	0.020	d
	pH, Standard Units	12	7.9	7.5	d	9/ 4(e)	0
	Total Residual Chlorine	12	0.111	<0.05	<0.06	0.5	0
109	Flow, mgd	12	0.1065	0.0837	0.0913	d	d
	pH, Standard Units	12	8.0	7.7	d	9/ 4(e)	0
	Total Residual Chlorine	12	0.195	0.101	0.145	0.5	0

Table 4.26. (continued)

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
113	Flow, mgd	12	0.432	0.0014	0.070	d	d
	pH, Standard Units	12	8.0	7.1	d	9/ 4(e)	0
	Total Residual Chlorine	11	<0.05	<0.05	<0.05	0.5	0
114	Flow, mgd	12	0.0274	0.0046	0.012	d	d
	pH, Standard Units	12	8.2	7.5	d	9/ 4(e)	0
	Total Residual Chlorine	12	<0.05	<0.05	<0.05	0.5	0
S05	Flow, mgd	13	0.4565	0.0004	0.09	d	d
	pH, Standard Units	13	6.8	5.7	d	9/ 4(e)	0
	Total Residual Chlorine	12	<0.05	<0.05	<0.05	0.5	0
S14	Flow, mgd	11	0.576	0.0014	0.069	d	d
	pH, Standard Units	12	8.24	7.3	d	9/ 4(e)	0
	Total Residual Chlorine	11	<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 4.27. Y-12 Complex Discharge Point S17, UNNAMED TRIBUTARY TO THE CLINCH RIVER

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	13	2.5	+/-1.5	-5.7*	+/-3.2	0.11	0.65	e	4.7E-04
Americium-241 (pCi/L)	13	0.16*	+/-0.32	-0.98*	+/-3.5	-0.14	0.087	-0.46	-5.8E-04
Beta activity (pCi/L)	13	8.4	+/-4.9	-8.5*	+/-5.4	1.6	1.2	e	6.7E-03
Cobalt-60 (pCi/L)	13	2.7*	+/-1.8	-0.25*	+/-2.2	0.72	0.22	0.014	3.0E-03
Cesium-137 (pCi/L)	13	3.8*	+/-2.3	-1.3*	+/-2.4	0.27	0.42	0.0091	1.2E-03
Gamma Activity (pCi/L)	13	22.0*	+/-18	-8.0*	+/-17	3.9	2.5	e	1.6E-02
Neptunium-237 (pCi/L)	13	0.1*	+/-0.17	-0.075*	+/-.064	-0.01	0.01	-0.04	-5E-05
Plutonium-238 (pCi/L)	13	0.053*	+/-.23	-0.14*	+/-0.16	-0.040	0.016	-0.099	-1.7E-04
Plutonium-239/240 (pCi/L)	13	0.074*	+/-0.18	-0.086*	+/-.46	-0.016	0.013	-0.054	-6.8E-05
Radium-226 (pCi/L)	12	0.35*	+/-.43	-0.27*	+/-0.41	0.026	0.056	0.026	1.1E-04
Radium-228 (pCi/L)	13	1.8	+/-.53	-0.4*	+/-0.59	0.6	0.2	0.6	3E-03
Strontium-89/90 (pCi/L)	13	1.5*	+/-2	-1.4*	+/-2.3	-0.18	0.25	-0.018	-7.5E-04
Total Radium Alpha (pCi/L)	13	0.56	+/-0.33	0.02*	+/-.14	0.3	0.05	e	1E-03
Technetium-99 (pCi/L)	13	9.0*	+/-8.3	-2.8*	+/-8.4	3.0	1.1	0.003	1.2E-02
Thorium-228 (pCi/L)	13	0.045*	+/-0.22	-0.11*	+/-.13	-0.028	0.014	-0.0069	-1.2E-04
Thorium-230 (pCi/L)	13	0.25*	+/-.36	-0.18*	+/-.3	0.081	0.038	0.027	3.4E-04
Thorium-232 (pCi/L)	13	0.035*	+/-.081	-0.029*	+/-0.067	-0.00060	0.0048	-0.0012	-2.6E-06
Thorium-234 (pCi/L)	13	0.51	+/-0.26	0.058*	+/-.13	0.26	0.038	0.0026	1.1E-03
Tritium (pCi/L)	12	750.0*	+/-550	-490.0*	+/-530	-27.08	102.8	-0.001400	-1.140E-01
Uranium-234 (pCi/L)	13	1.1	+/-0.45	0.36	+/-.17	0.65	0.062	0.13	2.8E-03
Uranium-235 (pCi/L)	13	0.063*	+/-.12	-0.03*	+/-0.14	0.02	0.009	0.003	9E-05
Uranium-236 (pCi/L)	13	0.049*	+/-.079	-0.023*	+/-0.044	0.0070	0.0054	0.0014	3.0E-05
Uranium-238 (pCi/L)	13	0.51	+/-0.26	0.058*	+/-.13	0.26	0.038	0.043	1.1E-03

(e) Not applicable
* Provisional Result

Table 4.28. Y-12 Complex Discharge Point S19, S19, ROGER'S QUARRY

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	365	0.864	0.114	0.232	d	d
pH, Standard Unit	13	8.3	7.5	d	9/ 6(e)	0
Silver	13	<0.02	<0.0004	<0.005	d	d
Aluminum	13	<0.2	<0.2	<0.2	d	d
Arsenic	13	<0.2	0.0032	<0.07	d	d
Boron	13	<0.1	<0.1	<0.1	d	d
Barium	13	0.0521	0.047	0.049	d	d
Beryllium	13	<0.0005	<0.0002	<0.0004	d	d
Calcium	13	41.6	34.2	37.9	d	d
Cadmium	13	<0.01	<0.001	<0.003	d	d
Cobalt	13	<0.02	<0.0002	<0.01	d	d
Chromium	13	<0.02	<0.004	<0.01	d	d
Copper	13	<0.02	<0.002	<0.008	d	d
Iron	13	<0.05	<0.05	<0.05	d	d
Potassium	13	2.03	<2.0	<2.0	d	d
Lithium	13	0.263	0.0108	0.0319	d	d
Magnesium	13	10.8	9.48	9.96	d	d
Manganese	13	0.0233	<0.005	<0.01	d	d
Molybdenum	13	<0.05	<0.02	<0.02	d	d
Sodium	13	1.76	1.28	1.55	d	d
Nickel	13	<0.05	<0.002	<0.02	d	d
Lead	13	<0.1	<0.0002	<0.02	d	d
Antimony	13	<0.2	<0.001	<0.1	d	d
Strontium	13	0.208	0.191	0.198	d	d
Thallium	13	<0.2	<0.2	<0.2	d	d
Uranium	18	<0.001	0.0003	<0.0008	d	d
Vanadium	13	<0.02	<0.02	<0.02	d	d
Zinc	13	0.0939	0.0038	<0.0377	d	d

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

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

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Max	Concentration +/-	Concentration Min	Concentration +/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	12	5.6	+/-3.5	-6.0*	+/-3	0.60	0.85	e	1.9E-04
Americium-241 (pCi/L)	12	0.19*	+/-.27	-1.5*	+/-3.5	-0.16	0.13	-0.52	-5.0E-05
Beta activity (pCi/L)	12	5.3*	+/-4.3	-4.8*	+/-5.7	1.3	0.95	e	4.1E-04
Cobalt-60 (pCi/L)	12	1.3*	+/-1.6	-1.5*	+/-2.1	0.052	0.27	0.0010	1.7E-05
Cesium-137 (pCi/L)	12	3.2*	+/-2.2	-1.8*	+/-2.6	0.87	0.39	0.029	2.8E-04
Gamma Activity (pCi/L)	12	2.7*	+/-17	-12.0*	+/-17	-3.7	1.6	e	-1.2E-03
Neptunium-237 (pCi/L)	12	0.016*	+/-0.15	-0.15*	+/-.13	-0.038	0.014	-0.13	-1.2E-05
Plutonium-238 (pCi/L)	12	1.5	+/-.41	-0.18*	+/-0.19	0.11	0.13	0.27	3.5E-05
Plutonium-239/240 (pCi/L)	12	0.045*	+/-0.14	-0.085*	+/-.44	0.00020	0.0097	0.00070	6.7E-08
Radium-226 (pCi/L)	12	1.3	+/-3.1	-0.28*	+/-0.39	0.16	0.13	0.16	5.3E-05
Radium-228 (pCi/L)	12	1.9*	+/-1.3	-0.83*	+/-.88	0.40	0.20	0.40	1.3E-04
Strontium-89/90 (pCi/L)	12	2.5*	+/-1.9	-2.9*	+/-1.8	0.087	0.44	0.0087	2.8E-05
Total Radium Alpha (pCi/L)	12	0.6	+/-0.37	-0.048*	+/-.15	0.2	0.05	e	7E-05
Technetium-99 (pCi/L)	12	13.0	+/-8.1	-7.6*	+/-8.2	2.0	2.0	0.0020	6.4E-04
Thorium-228 (pCi/L)	12	0.19*	+/-0.24	-0.11*	+/-.17	0.012	0.027	0.0030	3.8E-06
Thorium-230 (pCi/L)	12	0.3*	+/-0.38	-0.29*	+/-0.5	0.01	0.06	0.005	5E-06
Thorium-232 (pCi/L)	12	0.032*	+/-.07	-0.27*	+/-.16	-0.024	0.023	-0.049	-7.8E-06
Thorium-234 (pCi/L)	12	0.22*	+/-0.22	0.021*	+/-.072	0.096	0.016	0.0010	3.1E-05
Tritium (pCi/L)	12	210.0*	+/-530	-380.0*	+/-530	-56.25	56.66	-0.002800	-1.800E-02
Uranium-234 (pCi/L)	12	0.26*	+/-0.27	0.04*	+/-0.3	0.1	0.02	0.03	4E-05
Uranium-235 (pCi/L)	12	0.058*	+/-0.13	-0.05*	+/-.044	-0.007	0.01	-0.001	-2E-06
Uranium-236 (pCi/L)	12	0.026*	+/-.052	-0.042*	+/-0.049	-0.0062	0.0054	-0.0012	-2.0E-06
Uranium-238 (pCi/L)	12	0.22*	+/-0.22	0.021*	+/-.072	0.096	0.016	0.016	3.1E-05

(e) Not applicable
* Provisional Result

Table 4.30. Y-12 Complex Discharge Point SS6, SANITARY SEWER STATION 6

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration			Reference Value(b)	Number of Values Exceeding Reference
		Max	Min	Avg		
Flow, gpd	365	2200000.0	320000.0	599929.8	d	d
pH, Std Unit	17	7.9	7.1	d	9/ 6(e)	0
Silver	17	0.013	<0.0004	<0.003	0.1	0
Aluminum	17	0.84	<0.2	<0.3	d	d
Arsenic	17	<0.002	<0.002	<0.002	0.015	0
Boron	17	<0.1	<0.1	<0.1	d	d
Beryllium	17	<0.0005	<0.0002	<0.0003	d	d
Benzene	6	<0.005	<0.005	<0.005	0.015	0
Biochemical Oxygen	17	76.6	26.1	41.9	300	0
Cadmium	17	<0.001	<0.001	<0.001	0.005	0
Cobalt	11	0.0022	0.0006	0.001	d	d
Chromium	17	0.0043	<0.004	<0.004	0.075	0
Copper	17	0.0817	0.0294	0.0455	0.21	0
Cyanide	14	0.0065	<0.005	<0.005	0.062	0
Iron	17	0.917	0.268	0.508	15	0
Hexane Extractable	17	9.33	<6.0	<6.6	50	0
Mercury	17	0.0134	0.0007	0.004	0.035	0
Kjeldahl Nitrogen	17	20.1	6.38	12.9	90	0
Methylene chloride	6	<0.005	<0.005	<0.005	0.041	0
Manganese	17	0.0717	0.0216	0.0338	d	d
Molybdenum	1	0.0084	0.0084	0.0084	0	
Nickel	17	0.0084	0.0025	0.006	0.032	0
Nitrate/Nitrite as Nitrogen	6	0.968	0.544	0.838	10	0
Lead	17	0.0015	0.0004	0.001	0.074	0
Phenols - Total Recoverable	17	0.0277	<0.005	<0.01	0.5	0
Selenium	17	<0.2	<0.004	<0.07	d	d
Suspended Solids	17	223.0	31.2	78.2	300	0

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

Table 4.31. Y-12 Complex Discharge Point SS6, SANITARY SEWER STATION 6

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration			Reference Value(b)	Number of Values Exceeding Reference
		Max	Min	Avg		
Toluene	6	<0.005	<0.005	<0.005	0.02	0
Trichloroethene	6	<0.005	<0.005	<0.005	0.027	0
Uranium	33	0.0117	0.0027	0.0056	d	d
Zinc	17	0.142	0.0344	0.0962	0.75	0

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

Table 4.32. Y-12 Complex Discharge Point SS6, SANITARY SEWER STATION 6

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Max	Concentration +/-	Concentration Min	Concentration +/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	52	17.0	+/-4	-6.5*	+/-8.6	4.5	0.57	e	3.7E-03
Beta activity (pCi/L)	52	17.0	+/-9.4	-0.59*	+/-6	7.4	0.57	e	6.2E-03
Gamma Activity (pCi/L)	8	15.0*	+/-18	-11.0*	+/-17	-0.160	3.08	e	-1.33E-04
Uranium-234 (pCi/L)	13	110.0	+/-12	1.4	+/-.37	11	8.3	2.2	9.0E-03
Uranium-235 (pCi/L)	13	3.8	+/-.81	-0.045*	+/-.11	0.39	0.29	0.065	3.2E-04
Uranium-236 (pCi/L)	11	0.35	+/-.21	-0.013*	+/-.053	0.053	0.031	0.011	4.4E-05
Uranium-238 (pCi/L)	13	2.7	+/-.57	1.2	+/-.34	2.0	0.13	0.34	1.7E-03

(e) Not applicable

* Provisional Result

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

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration			Reference Value(b)	Number of Values Exceeding Reference
		Max	Min	Avg		
Flow, mgd	348	39.76	0.222	3.46	d	d
pH, Standard Unit	24	7.7	7.1	d	9/ 6(e)	0
Silver	12	<0.02	<0.02	<0.02	0.0033	0
Aluminum	12	1.02	<0.2	<0.3	d	d
Arsenic	12	<0.2	<0.2	<0.2	0.0010	0
Boron	12	<0.1	<0.1	<0.1	d	d
Barium	12	0.0687	0.044	0.057	d	d
Beryllium	12	<0.0005	<0.0005	<0.0005	d	d
Calcium	12	63.9	34.2	42.9	d	d
Cadmium	12	<0.01	<0.01	<0.01	0.002	0
Chloride	12	11.1	3.2	5.1	d	d
Cobalt	12	<0.02	<0.02	<0.02	d	d
Chromium	12	<0.02	<0.02	<0.02	0.016	0
Copper	12	<0.02	<0.02	<0.02	0.013	0
Iron	12	0.58	0.12	0.24	d	d
Mercury	12	<0.0002	<0.0002	<0.0002	0.00051	0
Potassium	12	<2.0	<2.0	<2.0	d	d
Lithium	12	0.0117	<0.01	<0.01	d	d
Magnesium	12	18.1	9.67	13.3	d	d
Manganese	12	0.137	0.0191	0.0545	d	d
Molybdenum	12	<0.05	<0.02	<0.02	d	d
Sodium	12	6.78	1.97	3.30	d	d
Nickel	12	<0.05	<0.05	<0.05	0.470	0
Nitrite as Nitrogen	12	<0.15	<0.076	<0.082	d	d
Nitrate as Nitrogen	12	6.62	0.181	1.68	d	d
Lead	12	<0.1	<0.1	<0.1	0.065	0
Phenols - Total Recoverable	12	0.0078	<0.005	<0.005	d	d

(a) Units in mg/L unless otherwise indicated.
(b) Tennessee Water Quality Criteria
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

Table 4.34. Y-12 Complex Discharge Point STA304, STATION 304, BEAR CREEK AT HIGHWAY 95.

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Antimony	12	<0.2	<0.2	<0.2	0.0056	0
Selenium	12	<0.2	<0.2	<0.2	0.02	0
Strontium	12	0.116	0.0497	0.0641	d	d
Sulfate	12	26.5	3.81	8.50	d	d
Suspended Solids	12	10.8	<1.0	<3.6	d	d
Thorium	12	<0.2	<0.2	<0.2	d	d
Titanium	12	<0.05	<0.05	<0.05	d	d
Thallium	12	<0.2	<0.2	<0.2	0.0017	0
Uranium	12	0.042	0.0063	0.016	d	d
Vanadium	12	<0.02	<0.02	<0.02	d	d
Zinc	12	<0.05	<0.05	<0.05	0.120	0
Zirconium	12	<0.2	<0.2	<0.2	d	d

(a) Units in mg/L unless otherwise indicated.
(b) Tennessee Water Quality Criteria
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

Table 4.35. Y-12 Complex Discharge Point STA304, STATION 304, BEAR CREEK AT HIGHWAY 95.

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Max	Concentration +/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	12	21.0	+/-5	3.5*	+/-2.7	7.5	1.3	e	3.6E-02
Americium-241 (pCi/L)	12	0.19*	+/-0.32	-1.5*	+/-3.5	-0.11	0.13	-0.38	-5.5E-04
Beta activity (pCi/L)	12	27.0	+/-5.7	-0.083*	+/-5.1	12	2.0	e	5.6E-02
Cobalt-60 (pCi/L)	12	2.9*	+/-1.9	-2.6*	+/-2.1	0.37	0.45	0.0073	1.8E-03
Cesium-137 (pCi/L)	12	1.5*	+/-1.8	-1.5*	+/-2.1	0.38	0.27	0.013	1.8E-03
Gamma Activity (pCi/L)	12	15.0*	+/-18	-24.0*	+/-18	-1.15	2.91	e	-5.48E-03
Neptunium-237 (pCi/L)	12	0.18*	+/-0.18	-0.092*	+/-0.17	0.019	0.022	0.063	9.1E-05
Plutonium-238 (pCi/L)	12	0.14*	+/-0.19	-0.12*	+/-.13	0.038	0.026	0.096	1.8E-04
Plutonium-239/240 (pCi/L)	12	0.065*	+/-0.16	-0.11*	+/-.42	-0.027	0.015	-0.089	-1.3E-04
Radium-226 (pCi/L)	12	1.1	+/-6.5	-0.17*	+/-0.23	0.26	0.10	0.26	1.2E-03
Radium-228 (pCi/L)	12	1.3*	+/-1.4	-0.18*	+/-.53	0.45	0.13	0.45	2.1E-03
Strontium-89/90 (pCi/L)	12	2.6*	+/-1.9	-0.97*	+/-2.3	1.2	0.32	0.12	5.7E-03
Total Radium Alpha (pCi/L)	12	0.53	+/-.3	-0.092*	+/-.13	0.23	0.059	e	1.1E-03
Technetium-99 (pCi/L)	12	38.0	+/-9.5	-1.0*	+/-9.7	7.4	3.0	0.0074	3.5E-02
Thorium-228 (pCi/L)	12	0.69	+/-0.38	-0.069*	+/-.17	0.11	0.063	0.027	5.2E-04
Thorium-230 (pCi/L)	12	0.23*	+/-0.41	-0.26*	+/-0.51	-0.015	0.047	-0.0050	-7.1E-05
Thorium-232 (pCi/L)	12	0.074*	+/-.095	-0.028*	+/-.043	0.012	0.0087	0.024	5.6E-05
Thorium-234 (pCi/L)	12	12.0	+/-1.6	1.7	+/-0.47	4.7	0.77	0.047	2.2E-02
Tritium (pCi/L)	12	950.0	+/-610	-370.0*	+/-490	131.7	120.9	0.006600	6.290E-01
Uranium-234 (pCi/L)	12	6.0	+/-0.95	0.83	+/-0.43	2.2	0.38	0.44	1.1E-02
Uranium-235 (pCi/L)	12	0.19	+/-.15	-0.0071*	+/-0.15	0.11	0.019	0.018	5.2E-04
Uranium-236 (pCi/L)	12	0.072	+/-.083	-0.016*	+/-.054	0.018	0.0084	0.0036	8.6E-05
Uranium-238 (pCi/L)	12	12.0	+/-1.6	1.7	+/-0.47	4.7	0.77	0.78	2.2E-02

(e) Not applicable

* Provisional Result

Table 4.36. Y-12 Complex Discharge Point 94221, SWHISS STATION 9422-1

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration			Reference Value(b)	Number of Values Exceeding Reference
		Max	Min	Avg		
Flow, mgd	365	81.3	6.2	8.4	d	d
pH, Standard Unit	150	8.4	7.0	d	9/ 6(e)	0
TEMPERATURE, deg C	149	22.6	7.8	16	30.5	0
Silver	111	<0.02	<0.02	<0.02	0.0032	0
Aluminum	111	9.31	<0.2	<0.6	d	d
Arsenic	111	<0.2	<0.2	<0.2	0.010	0
Boron	111	0.124	<0.1	<0.1	d	d
Barium	111	0.124	0.0361	0.0459	2	0
Beryllium	111	<0.0005	<0.0005	<0.0005	0.004	0
Calcium	111	72.5	19.2	41.8	d	d
Cadmium	111	<0.01	<0.01	<0.01	0.002	0
Cobalt	111	<0.02	<0.02	<0.02	d	d
Chromium	111	0.15	<0.02	<0.02	0.016	1
Copper	111	0.0575	<0.02	<0.02	0.013	2
Iron	111	9.91	<0.05	<0.6	d	d
Mercury	360	0.0182	<0.0002	<0.0005	0.000051	339
Potassium	111	4.41	<2.0	<2.1	d	d
Lithium	111	0.769	<0.01	<0.04	d	d
Magnesium	111	17.1	4.22	11.2	d	d
Manganese	111	0.904	0.0098	0.067	d	d
Molybdenum	111	<0.05	<0.02	<0.03	d	d
Sodium	111	22.3	2.25	8.55	d	d
Ammonia as Nitrogen	111	<0.2	<0.2	<0.2	d	d
Nickel	111	<0.05	<0.05	<0.05	0.47	0
Nitrate/Nitrite as Nitrogen	111	1.51	0.0622	0.638	10	0
Lead	111	<0.1	<0.1	<0.1	0.065	d
Antimony	111	<0.2	<0.2	<0.2	0.0056	0

(a) Units in mg/L unless otherwise indicated.
(b) Tennessee Water Quality Criteria
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

Table 4.37. Y-12 Complex Discharge Point 94221, SWHISS STATION 9422-1

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Concentration			Reference Value(b)	Number of Values Exceeding Reference
		Max	Min	Avg		
Selenium	111	<0.2	<0.2	<0.2	0.02	0
Strontium	111	0.153	0.0539	0.113	d	d
Suspended Solids	111	551.0	1.43	18.7	d	d
Thorium	111	<0.2	<0.2	<0.2	d	d
Titanium	111	0.134	<0.05	<0.05	d	d
Thallium	111	<0.2	<0.2	<0.2	0.0017	0
Uranium	52	0.026	0.0017	0.0080	d	d
Vanadium	111	<0.02	<0.02	<0.02	d	d
Zinc	111	0.344	<0.05	<0.06	0.12	3
Zirconium	111	<0.2	<0.2	<0.2	d	d

(a) Units in mg/L unless otherwise indicated.
(b) Tennessee Water Quality Criteria.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

Table 4.38. Y-12 Complex Discharge Point 94221, SWHISS STATION 9422-1

From: 2005/01/01 To: 2005/12/31

Parameter	Number of Samples	Max	Concentration +/-	Concentration Min	Concentration +/-	Average	Standard	DCG	Percentage of Total Curies
Alpha activity (pCi/L)	52	10.0	+/-4	-4.5*	+/-3.7	4.0	0.40	e	4.7E-02
Americium-241 (pCi/L)	52	0.32	+/-.26	-1.6*	+/-3.5	-0.14	0.057	-0.47	-1.6E-03
Beta activity (pCi/L)	52	17.0	+/-5.5	0.1*	+/-3.9	6	0.5	e	7E-02
Cobalt-60 (pCi/L)	52	3.4*	+/-2.5	-1.9*	+/-2.6	0.35	0.14	0.0070	4.1E-03
Cesium-137 (pCi/L)	52	2.4*	+/-2.3	-4.4*	+/-4.2	0.068	0.18	0.0023	7.9E-04
Gamma Activity (pCi/L)	52	26.0*	+/-18	-24.0*	+/-17	1.99	1.42	e	2.31E-02
Neptunium-237 (pCi/L)	52	0.17*	+/-.17	-0.12*	+/-0.18	0.0032	0.0089	0.011	3.7E-05
Plutonium-238 (pCi/L)	52	0.42*	+/-0.41	-0.14*	+/-.22	0.00070	0.011	0.0017	7.8E-06
Plutonium-239/240 (pCi/L)	52	0.25*	+/-0.29	-0.2*	+/-.67	-0.01	0.01	-0.04	-2E-04
Radium-226 (pCi/L)	52	0.74	+/-1.2	-0.48*	+/-.66	0.15	0.036	0.15	1.7E-03
Radium-228 (pCi/L)	52	2.7	+/-1.3	-1.1*	+/-.88	0.50	0.084	0.50	5.8E-03
Strontium-89/90 (pCi/L)	52	5.0	+/-2.8	-2.1*	+/-1.8	0.47	0.17	0.047	5.5E-03
Total Radium Alpha (pCi/L)	52	1.1	+/-.38	-0.13*	+/-0.14	0.29	0.032	e	3.3E-03
Technetium-99 (pCi/L)	52	15.0	+/-8.2	-16.0*	+/-9.3	2.64	0.868	0.00260	3.06E-02
Thorium-228 (pCi/L)	52	0.45*	+/-.35	-0.22*	+/-.15	-0.0020	0.014	-0.00050	-2.4E-05
Thorium-230 (pCi/L)	52	0.41*	+/-0.45	-0.33*	+/-.077	0.067	0.024	0.022	7.8E-04
Thorium-232 (pCi/L)	52	0.069*	+/-0.12	-0.34*	+/-.23	-0.0059	0.0076	-0.012	-6.9E-05
Thorium-234 (pCi/L)	52	8.2	+/-1.1	0.095	+/-0.041	2.5	0.24	0.025	2.9E-02
Tritium (pCi/L)	52	740.0	+/-600	-560.0*	+/-540	77.08	41.19	0.003900	8.960E-01
Uranium-234 (pCi/L)	52	3.3	+/-0.63	0.056*	+/-0.044	1.1	0.085	0.23	1.3E-02
Uranium-235 (pCi/L)	52	0.23	+/-.21	-0.11*	+/-0.16	0.048	0.010	0.0081	5.6E-04
Uranium-236 (pCi/L)	50	0.11	+/-.098	-0.031*	+/-0.11	0.021	0.0045	0.0042	2.4E-04
Uranium-238 (pCi/L)	52	8.2	+/-1.1	0.095	+/-0.041	2.5	0.24	0.42	2.9E-02

(e) Not applicable

* Provisional Result

Table 4.39. REGIME=BC AREA NAME=Bear Creek Burial Grounds Waste Management Area

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Chloride	(mg/L)		40	40	97.1	1	22.65775	250	0
Fluoride	(mg/L)		40	17	5.6	0.1	1.379529	4	4
Nitrate Nitrogen	(mg/L)		40	10	8.57	0.0361	1.82344	10	0
Sulfate	(mg/L)		40	40	31.1	1.55	7.76075	250	0
Aluminum, ICAP	(mg/L)		40	10	4.2	0.262	0.9739	0.2	10
Antimony, ICAP	(mg/L)		40	40	0.2	0.2	0.2	0.006	40
Antimony, ICAP	(mg/L)	FILTERED	6	6	0.2	0.2	0.2	0.006	6
Arsenic, PMS	(mg/L)		40	4	0.0188	0.0066	0.0106	0.05	0
Arsenic, ICAP	(mg/L)		40	40	0.2	0.2	0.2	0.05	40
Arsenic, ICAP	(mg/L)	FILTERED	6	6	0.2	0.2	0.2	0.05	6
Barium, ICAP	(mg/L)		40	40	0.966	0.0352	0.240168	2	0
Barium, ICAP	(mg/L)	FILTERED	6	6	0.184	0.0713	0.128883	2	0
Boron, ICAP	(mg/L)		40	16	12.3	0.274	2.28575	NR	NA
Boron, ICAP	(mg/L)	FILTERED	6	2	0.305	0.287	0.296	NR	NA
Cadmium, PMS	(mg/L)		40	2	0.0027	0.00262	0.00266	0.005	0
Cadmium, ICAP	(mg/L)		40	40	0.01	0.01	0.01	0.005	40
Cadmium, ICAP	(mg/L)	FILTERED	6	6	0.01	0.01	0.01	0.005	6
Calcium, ICAP	(mg/L)		40	40	152	1.26	54.94925	NR	NA
Calcium, ICAP	(mg/L)	FILTERED	6	6	99.1	1.72	49.39833	NR	NA
Chromium, PMS	(mg/L)		40	8	0.0611	0.0112	0.025025	NR	NA
Chromium, ICAP	(mg/L)		40	13	0.0643	0.02	0.027646	0.1	0
Chromium, ICAP	(mg/L)	FILTERED	6	3	0.02	0.02	0.02	0.1	0
Copper, ICAP	(mg/L)		40	1	0.0903	0.0903	0.0903	1.3	0
Iron, ICAP	(mg/L)		40	27	6.62	0.064	1.056163	0.3	16

Table 4.39 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Iron, ICAP	(mg/L)	FILTERED	6	2	0.464	0.346	0.405	0.3	2
Lead, PMS	(mg/L)		40	23	0.0196	0.00052	0.004958	0.015	3
Lead, PMS	(mg/L)	FILTERED	6	3	0.00128	0.000805	0.001115	0.015	0
Lead, ICAP	(mg/L)		40	40	0.1	0.1	0.1	0.015	40
Lead, ICAP	(mg/L)	FILTERED	6	6	0.1	0.1	0.1	0.015	6
Lithium, ICAP	(mg/L)		40	31	0.397	0.0102	0.071874	NR	NA
Lithium, ICAP	(mg/L)	FILTERED	6	6	0.0679	0.0114	0.0319	NR	NA
Magnesium, ICAP	(mg/L)		40	38	18.2	0.242	8.117737	NR	NA
Magnesium, ICAP	(mg/L)	FILTERED	6	6	11.5	0.782	5.078667	NR	NA
Manganese, ICAP	(mg/L)		40	28	2.34	0.00511	0.373864	0.05	16
Manganese, ICAP	(mg/L)	FILTERED	6	2	0.0937	0.0724	0.08305	0.05	2
Nickel, PMS	(mg/L)		40	17	0.0858	0.00506	0.031302	NR	NA
Nickel, PMS	(mg/L)	FILTERED	6	2	0.0177	0.0127	0.0152	NR	NA
Nickel, ICAP	(mg/L)		40	13	0.0783	0.05	0.0576	0.1	0
Nickel, ICAP	(mg/L)	FILTERED	6	3	0.05	0.05	0.05	0.1	0
Niobium, ICAP	(mg/L)		40	40	0.2	0.2	0.2	NR	NA
Niobium, ICAP	(mg/L)	FILTERED	6	6	0.2	0.2	0.2	NR	NA
Phosphorus, ICAP	(mg/L)		40	40	0.5	0.5	0.5	NR	NA
Phosphorus, ICAP	(mg/L)	FILTERED	6	6	0.5	0.5	0.5	NR	NA
Potassium, ICAP	(mg/L)		40	16	13.7	2.08	3.943125	NR	NA
Potassium, ICAP	(mg/L)	FILTERED	6	1	2.78	2.78	2.78	NR	NA
Selenium, PMS	(mg/L)		40	2	0.0824	0.0306	0.0565	0.05	1
Selenium, ICAP	(mg/L)		40	40	0.2	0.2	0.2	0.05	40
Selenium, ICAP	(mg/L)	FILTERED	6	6	0.2	0.2	0.2	0.05	6
Silicon, ICAP	(mg/L)		40	40	17.3	2.45	8.3395	NR	NA

Table 4.39 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Silicon, ICAP	(mg/L)	FILTERED	6	6	10.3	4.49	7.11	NR	NA
Sodium, ICAP	(mg/L)		40	40	376	2.11	53.016	NR	NA
Sodium, ICAP	(mg/L)	FILTERED	6	6	124	4.59	43.92167	NR	NA
Strontium, ICAP	(mg/L)		40	40	1.81	0.0178	0.285935	NR	NA
Strontium, ICAP	(mg/L)	FILTERED	6	6	0.301	0.105	0.221833	NR	NA
Sulfur, ICAP	(mg/L)		40	40	10.6	0.5	2.826075	NR	NA
Sulfur, ICAP	(mg/L)	FILTERED	6	6	2.32	0.728	1.408167	NR	NA
Thallium, PMS	(mg/L)		40	3	0.000635	0.00052	0.00056	0.002	0
Thallium, ICAP	(mg/L)		40	40	0.2	0.2	0.2	NR	NA
Thallium, ICAP	(mg/L)	FILTERED	6	6	0.2	0.2	0.2	NR	NA
Titanium, ICAP	(mg/L)		40	40	0.123	0.05	0.051825	NR	NA
Titanium, ICAP	(mg/L)	FILTERED	6	6	0.05	0.05	0.05	NR	NA
Uranium, PMS	(mg/L)		40	12	0.0476	0.000525	0.009275	0.03	2
Uranium, PMS	(mg/L)	FILTERED	6	2	0.00226	0.001	0.00163	0.03	0
Uranium, ICAP	(mg/L)		40	40	2	2	2	NR	NA
Uranium, ICAP	(mg/L)	FILTERED	6	6	2	2	2	NR	NA
Zirconium, ICAP	(mg/L)		40	40	0.2	0.2	0.2	NR	NA
Zirconium, ICAP	(mg/L)	FILTERED	6	6	0.2	0.2	0.2	NR	NA
Static Water Level	(ft - toc)		50	NA	28.83	2.37	14.7588	NR	NA
Alkalinity as CO3	(mg/L)		40	7	571	44.6	184.8714	NR	NA
Alkalinity as HCO3	(mg/L)		40	40	489	17.7	206.4075	NR	NA
Conductivity	(µmhos/cm)		40	40	1642	32	586.15	NR	NA
Dissolved Solids	(mg/L)		48	48	942	39	297.1875	500	6
pH	(pH)		40	40	10.42	5.41	7.591	6.5/8.5	14
Total Suspended Solids	(mg/L)		48	22	81	2	13.01818	NR	NA

Table 4.39 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Turbidity	(NTU)		40	40	55.2	0.09	5.6039	1	23
Uranium-233/234	(pCi/L)		2	1	0.79	0.79	0.79	NR	NA
Uranium-234	(pCi/L)		4	2	6.8	6.5	6.65	20	0
Uranium-235	(wt %)		9	9	0.96	0.23	0.514111	NR	NA
Uranium-235	(pCi/L)		6	1	0.28	0.28	0.28	24	0
Uranium-236	(pCi/L)		4	1	0.16	0.16	0.16	NR	NA
Uranium-238	(pCi/L)		6	2	12	12	12	24	0
Technetium-99	(pCi/L)		4	2	40	39	39.5	4000	0
Gross Alpha	(pCi/L)		42	6	17	1.31	9.818333	15	1
Gross Beta	(pCi/L)		42	6	41	4.51	17.355	50	0
1,1,1-Trichloroethane	(µg/L)		50	11	550	2	83.27273	200	2
1,1-Dichloroethane	(µg/L)		50	29	2600	1	305.8966	NR	NA
1,1-Dichloroethene	(µg/L)		50	25	160	1	59.32	7	17
1,2-Dichloroethane	(µg/L)		50	6	8	1	4.333333	5	3
1,2-Dichloroethene (Total)	(µg/L)		40	34	2500	2	412.5294	NR	NA
1,2-Dichloropropane	(µg/L)		50	1	6	6	6	5	1
2-Butanone	(µg/L)		50	1	29	29	29	NR	NA
Acetone	(µg/L)		50	2	19	12	15.5	NR	NA
Benzene	(µg/L)		50	15	1300	1	189.6	5	10
Carbon tetrachloride	(µg/L)		50	6	49	1	11.66667	5	2
Chloroethane	(µg/L)		50	11	27	1	9.090909	NR	NA
Chloroform	(µg/L)		50	9	23	2	11.77778	100	0
cis-1,2-Dichloroethene	(µg/L)		50	36	4500	2	617.0556	70	15
Dichlorodifluoromethane	(µg/L)		40	2	58	8	33	NR	NA

Table 4.39 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Ethylbenzene	(µg/L)		50	2	4	J	3	J	3.5	700	0
Methylene chloride	(µg/L)		50	3	11		2	J	5.333333	5	1
Tetrachloroethene	(µg/L)		50	30	3000		1	J	428.1	5	22
Toluene	(µg/L)		50	6	30		1	J	11.33333	1000	0
trans-1,2-Dichloroethene	(µg/L)		50	14	22		2	J	6.571429	100	0
Trichloroethene	(µg/L)		50	28	2000		2	J	249.6429	5	24
Trichlorofluoromethane	(µg/L)		40	6	26		4	J	16.33333	NR	NA
Vinyl chloride	(µg/L)		50	24	700		1	J	153.8333	2	20
Xylenes	(µg/L)		50	5	13		3	J	8.4	10000	0

Table 4.40. REGIME=BC AREA NAME= Environmental Management Waste Management Facility (EMWMF)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Static Water Level	(ft - toc)		50	NA	33.88		4.09		10.7998	NR	NA
Uranium-233/234	(pCi/L)		62	60	1.64		0.15		0.429667	NR	NA
Uranium-235/236	(pCi/L)		62	26	0.38		0.09		0.2	NR	NA
Neptunium-237	(pCi/L)		62	1	0.07		0.07		0.07	1.2	0
Uranium-238	(pCi/L)		62	35	1.91		0.08		0.300857	24	0
Americium-241	(pCi/L)		62	6	0.2		0.04		0.121667	1.2	0
Acetone	(µg/L)		62	5	100		5		31.8	NR	NA
Tetrachloroethene	(µg/L)		62	3	0.7	J	0.3	J	0.5	5	0
Toluene	(µg/L)		62	11	0.3	J	0.1	J	0.163636	1000	0
Trichloroethene	(µg/L)		62	4	4		0.4	J	2.1	5	0
Xylenes	(µg/L)		62	7	0.3		0.1	J	0.142857	10000	0

Table 4.41. REGIME=BC AREA NAME=Exit Pathway Monitoring Location (Picket) A

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Bicarbonate	(mg/L)		4	4	212	180	192.75	NR		NA
Chloride	(mg/L)		4	4	19.2	2.6	8.225	250		0
Fluoride	(mg/L)		4	3	0.16	0.12	0.146667	4		0
Nitrate/Nitrite	(mg/L)		4	4	2.2	0.71	1.1825	NR		NA
Sulfate	(mg/L)		4	4	15.6	8	11.675	250		0
Static Water Level	(ft - toc)		4	NA	88.98	15.7	52.36	NR		NA
Dissolved Solids	(mg/L)		4	4	285	205	243	500		0
Total Suspended Solids	(mg/L)		4	3	26.3	20.7	24.33333	NR		NA
Uranium-233/234	(pCi/L)		4	4	3.85	1.82	2.81	NR		NA
Uranium-235	(pCi/L)		4	1	0.58	0.58	0.58	24		0
Uranium-236	(pCi/L)		4	1	0.52	0.52	0.52	NR		NA
Uranium-238	(pCi/L)		4	4	5.56	2.41	4.4325	24		0
Technetium-99	(pCi/L)		4	2	9.26	6.14	7.7	4000		0
Gross Alpha	(pCi/L)		4	4	9.44	6.63	7.5725	15	f	0
Gross Beta	(pCi/L)		4	4	19.2	9.32	13.48	50	a	0

Table 4.42. REGIME=BC AREA NAME=Exit Pathway Monitoring Location (Picket) B

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		10	10	48	10.1	21.2	250		0
Fluoride	(mg/L)		10	10	0.306	0.112	0.1853	4		0
Nitrate Nitrogen	(mg/L)		10	10	22.6	5.7	13.618	10		6
Sulfate	(mg/L)		10	10	26.8	9.97	18.617	250		0
Aluminum, ICAP	(mg/L)		10	1	0.51	0.51	0.51	0.2		1
Antimony, ICAP	(mg/L)		10	10	0.2	0.2	0.2	0.006		10
Arsenic, ICAP	(mg/L)		10	10	0.2	0.2	0.2	0.05	j	10
Barium, ICAP	(mg/L)		10	10	0.143	0.0407	0.093	2		0
Cadmium, ICAP	(mg/L)		10	10	0.01	0.01	0.01	0.005		10
Calcium, ICAP	(mg/L)		10	10	98.6	52.7	71.16	NR		NA
Chromium, ICAP	(mg/L)		10	10	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		10	8	1.12	0.251	0.52875	0.3		6
Lead, PMS	(mg/L)		10	1	0.00067	0.00067	0.00067	0.015	c	0
Lead, ICAP	(mg/L)		10	10	0.1	0.1	0.1	0.015	c	10
Lithium, ICAP	(mg/L)		10	6	0.0195	0.0111	0.015883	NR		NA
Magnesium, ICAP	(mg/L)		10	10	32.3	12.7	23.07	NR		NA
Manganese, ICAP	(mg/L)		10	4	0.0237	0.0117	0.015525	0.05		0
Nickel, ICAP	(mg/L)		10	10	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		10	10	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		10	10	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		10	6	10.3	2.86	5.343333	NR		NA
Selenium, ICAP	(mg/L)		10	10	0.2	0.2	0.2	0.05		10
Silicon, ICAP	(mg/L)		10	10	4.9	3.53	4.229	NR		NA
Sodium, ICAP	(mg/L)		10	10	18.6	5.58	10.67	NR		NA

Table 4.42 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Strontium, ICAP	(mg/L)		10	10	0.402		0.0847		0.21567	NR		NA
Sulfur, ICAP	(mg/L)		10	10	8.89		3.36		6.277	NR		NA
Thallium, PMS	(mg/L)		10	2	0.00102		0.000645		0.000833	0.002		0
Thallium, ICAP	(mg/L)		10	10	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		10	10	0.05		0.05		0.05	NR		NA
Uranium, PMS	(mg/L)		10	10	0.0752		0.00903		0.027143	0.03		4
Uranium, ICAP	(mg/L)		10	10	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		10	10	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		10	NA	41.51		12.63		27.3	NR		NA
Alkalinity as HCO3	(mg/L)		10	10	238		162		198.7	NR		NA
Conductivity	(µmhos/cm)		10	10	751		381		572.5	NR		NA
Dissolved Solids	(mg/L)		10	10	423		229		322.8	500		0
pH	(pH)		10	10	7.69		7.05		7.399	6.5/8.5		0
Turbidity	(NTU)		10	10	11.6		0.238		3.7388	1		7
Uranium-233/234	(pCi/L)		4	4	15.2		2.44		8.09	NR		NA
Uranium-235	(wt %)		10	10	0.45		0.395		0.4128	NR		NA
Uranium-235	(pCi/L)		4	2	1.77		0.66		1.215	24		0
Uranium-236	(pCi/L)		4	2	1.84		0.65		1.245	NR		NA
Uranium-238	(pCi/L)		4	4	28.2		3.72		14.335	24		1
Gross Alpha	(pCi/L)		10	9	28		4.9		12.38889	15	f	2
Gross Beta	(pCi/L)		10	10	110		20		50.7	50	a	4
1,1-Dichloroethene	(µg/L)		10	2	2	J	2	J	2	7		0
1,2-Dichloroethene (Total)	(µg/L)		10	8	7		1	J	3.75	NR	b	NA
cis-1,2-Dichloroethene	(µg/L)		10	8	7		1	J	3.75	70		0
Trichloroethene	(µg/L)		10	10	35		2	J	12.5	5		6

Table 4.43. REGIME=BC AREA NAME=Exit Pathway Monitoring Location (Picket) C

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		18	18	86.6	6.52	34.69	250		0
Fluoride	(mg/L)		18	13	0.404	0.159	0.260846	4		0
Nitrate Nitrogen	(mg/L)		18	16	32.3	1.43	8.991875	10		6
Sulfate	(mg/L)		18	18	44.5	12	30.15	250		0
Aluminum, ICAP	(mg/L)		18	4	20.1	0.75	6.105	0.2		4
Antimony, ICAP	(mg/L)		18	18	0.2	0.2	0.2	0.006		18
Arsenic, PMS	(mg/L)		18	1	0.00764	0.00764	0.00764	0.05	j	0
Arsenic, ICAP	(mg/L)		18	18	0.2	0.2	0.2	0.05	j	18
Barium, ICAP	(mg/L)		18	18	0.306	0.037	0.123211	2		0
Beryllium, ICAP	(mg/L)		18	1	0.000813	0.000813	0.000813	0.004		0
Cadmium, ICAP	(mg/L)		18	18	0.01	0.01	0.01	0.005		18
Calcium, ICAP	(mg/L)		18	18	155	13.4	98.82778	NR		NA
Chromium, PMS	(mg/L)		18	1	0.0234	0.0234	0.0234	NR		NA
Chromium, ICAP	(mg/L)		18	18	0.0352	0.02	0.020844	0.1		0
Copper, ICAP	(mg/L)		18	1	0.0609	0.0609	0.0609	1.3		0
Iron, ICAP	(mg/L)		18	13	18.7	0.0789	2.069146	0.3		7
Lead, PMS	(mg/L)		18	4	0.0211	0.00146	0.006618	0.015	c	1
Lead, ICAP	(mg/L)		18	18	0.1	0.1	0.1	0.015	c	18
Lithium, ICAP	(mg/L)		18	9	0.0269	0.0131	0.016978	NR		NA
Magnesium, ICAP	(mg/L)		18	18	40	17	27.23333	NR		NA
Manganese, ICAP	(mg/L)		18	13	1.02	0.00628	0.379283	0.05		8
Nickel, PMS	(mg/L)		18	4	0.0349	0.00548	0.014163	NR		NA
Nickel, ICAP	(mg/L)		18	18	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		18	18	0.2	0.2	0.2	NR		NA

Table 4.43 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Phosphorus, ICAP	(mg/L)		18	18	0.5		0.5		0.5	NR	NA
Potassium, ICAP	(mg/L)		18	16	7.39		2.07		2.986875	NR	NA
Selenium, ICAP	(mg/L)		18	18	0.2		0.2		0.2	0.05	18
Silicon, ICAP	(mg/L)		18	18	28.5		0.873		6.323722	NR	NA
Sodium, ICAP	(mg/L)		18	18	33.2		1.99		15.70111	NR	NA
Strontium, ICAP	(mg/L)		18	18	1.27		0.0559		0.347461	NR	NA
Sulfur, ICAP	(mg/L)		18	18	14.9		4.03		9.945	NR	NA
Thallium, PMS	(mg/L)		18	1	0.00069		0.00069		0.00069	0.002	0
Thallium, ICAP	(mg/L)		18	18	0.2		0.2		0.2	NR	NA
Titanium, ICAP	(mg/L)		18	18	0.263		0.05		0.062506	NR	NA
Uranium, PMS	(mg/L)		18	14	0.0309		0.00059		0.008616	0.03	2
Uranium, ICAP	(mg/L)		18	18	2		2		2	NR	NA
Vanadium, ICAP	(mg/L)		18	1	0.0204		0.0204		0.0204	NR	NA
Zinc, ICAP	(mg/L)		18	2	0.116		0.0561		0.08605	5	0
Zirconium, ICAP	(mg/L)		18	18	0.2		0.2		0.2	NR	NA
Static Water Level	(ft - toc)		18	NA	75.02		7.41		36.30667	NR	NA
Alkalinity as HCO3	(mg/L)		18	18	374		126		285.7778	NR	NA
Conductivity	(µmhos/cm)		18	18	1211		339		759.3333	NR	NA
Dissolved Solids	(mg/L)		18	18	673		155		427.1667	500	7
pH	(pH)		18	18	8.42		6.72		7.225556	6.5/8.5	0
Total Suspended Solids	(mg/L)		18	6	13		2		4.833333	NR	NA
Turbidity	(NTU)		18	18	48.5		0.16		8.435167	1	10
Uranium-234	(pCi/L)		2	2	6.6		5.6		6.1	20	0
Uranium-235	(wt %)		8	8	0.54		0.4		0.47625	NR	NA
Uranium-236	(pCi/L)		1	1	0.1	R	0.1	R	0.1	NR	NA

Table 4.43 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Uranium-238	(pCi/L)		2	2	8.9		8.2		8.55	24		0
Technetium-99	(pCi/L)		2	2	23		13		18	4000		0
Gross Alpha	(pCi/L)		18	3	14		5.1		10.03333	15	f	0
Gross Beta	(pCi/L)		18	11	46		8.3		25.66364	50	a	0
1,1-Dichloroethene	(µg/L)		18	1	2	J	2	J	2	7		0
1,2-Dichloroethene (Total)	(µg/L)		18	13	3	J	1	J	2.153846	NR	b	NA
Carbon tetrachloride	(µg/L)		18	3	3	J	1	J	1.666667	5		0
cis-1,2-Dichloroethene	(µg/L)		18	13	3	J	1	J	2.153846	70		0
Tetrachloroethene	(µg/L)		18	9	4	J	1	J	2.111111	5		0
Trichloroethene	(µg/L)		18	18	120		4	J	35.11111	5		15

Table 4.44. REGIME=BC AREA NAME=Exit Pathway Monitoring Location (Picket) W

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Nitrate/Nitrite	(mg/L)		6	4	0.67		0.021		0.33625	NR		NA
Static Water Level	(ft - toc)		6	NA	37.61		24.25		31.84167	NR		NA
Uranium-233/234	(pCi/L)		6	3	1.46		0.38		0.913333	NR		NA
Uranium-238	(pCi/L)		6	2	0.95		0.45		0.7	24		0
Gross Alpha	(pCi/L)		6	2	3.14		1.31		2.225	15	f	0
Gross Beta	(pCi/L)		6	3	5.74		3.42		4.833333	50	a	0
Acetone	(µg/L)		6	1	6	J	6	J	6	NR		NA

Table 4.45. REGIME=BC AREA NAME=Exit Pathway Spring/Surface Water

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Bicarbonate	(mg/L)		27	27	218		56		152.537	NR		NA
Carbonate	(mg/L)		27	1	17.9	Q	17.9	Q	17.9	NR		NA
Chloride	(mg/L)		39	39	102		0.92		15.16077	250		0
Fluoride	(mg/L)		39	26	0.58		0.1		0.230885	4		0
Nitrate Nitrogen	(mg/L)		12	12	42.7		0.526		9.827	10		3
Nitrate/Nitrite	(mg/L)		66	65	320		0.02		39.15854	NR		NA
Sulfate	(mg/L)		39	39	52.4		2.5		16.10026	250		0
Aluminum, ICAP	(mg/L)		12	12	1.73		0.287		0.69	0.2		12
Antimony, PMS	(mg/L)		12	1	0.00252		0.00252		0.00252	0.006		0
Antimony, ICAP	(mg/L)		12	12	0.2		0.2		0.2	0.006		12
Arsenic, ICAP	(mg/L)		12	12	0.2		0.2		0.2	0.05	j	12
Barium, ICAP	(mg/L)		12	12	0.182		0.0385		0.087083	2		0
Beryllium, ICAP	(mg/L)		12	1	0.00053		0.00053		0.00053	0.004		0
Boron, ICAP	(mg/L)		12	2	0.144		0.125		0.1345	NR		NA
Cadmium, PMS	(mg/L)		12	2	0.00564		0.00482		0.00523	0.005		1
Cadmium, ICAP	(mg/L)		12	12	0.01		0.01		0.01	0.005		12
Calcium, ICAP	(mg/L)		12	12	186		23.5		70.81667	NR		NA
Chromium, ICAP	(mg/L)		12	12	0.02		0.02		0.02	0.1		0
Iron, ICAP	(mg/L)		12	12	1.7		0.23		0.57175	0.3		9
Lead, PMS	(mg/L)		12	4	0.00145		0.00068		0.00102	0.015	c	0
Lead, ICAP	(mg/L)		12	12	0.1		0.1		0.1	0.015	c	12
Lithium, ICAP	(mg/L)		12	2	0.0163		0.0119		0.0141	NR		NA
Magnesium, ICAP	(mg/L)		12	12	18.6		6.84		12.56583	NR		NA
Manganese, ICAP	(mg/L)		12	12	1.44		0.00845		0.281546	0.05		6

Table 4.45 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Nickel, PMS	(mg/L)		12	2	0.0256	0.0238	0.0247	NR		NA
Nickel, ICAP	(mg/L)		12	12	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		12	12	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		12	12	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		12	4	3.66	2.49	3.005	NR		NA
Selenium, ICAP	(mg/L)		12	12	0.2	0.2	0.2	0.05		12
Silicon, ICAP	(mg/L)		12	12	7.13	4.21	5.193333	NR		NA
Sodium, ICAP	(mg/L)		12	12	32.1	1.85	9.181667	NR		NA
Strontium, ICAP	(mg/L)		12	12	0.482	0.0333	0.169358	NR		NA
Sulfur, ICAP	(mg/L)		12	12	17.6	1.93	6.279167	NR		NA
Thallium, PMS	(mg/L)		12	1	0.00104	0.00104	0.00104	0.002		0
Thallium, ICAP	(mg/L)		12	12	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		12	12	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		12	12	0.106	0.00424	0.022544	0.03		1
Uranium, ICAP	(mg/L)		12	12	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		12	12	0.2	0.2	0.2	NR		NA
Alkalinity as HCO3	(mg/L)		12	12	366	78.2	163.3833	NR		NA
Conductivity	(µmhos/cm)		12	12	1112	189	503.75	NR		NA
Dissolved Solids	(mg/L)		37	37	1190	98	311.8378	500		3
pH	(pH)		12	12	7.85	7.05	7.321667	6.5/8.5		0
Total Suspended Solids	(mg/L)		37	19	94	3	16.24737	NR		NA
Turbidity	(NTU)		12	12	27.8	1.45	9.178333	1		12
Uranium-233/234	(pCi/L)		216	215	33.2	0.96	11.65819	NR		NA
Uranium-235	(pCi/L)		216	164	3.13	0.34	1.041341	24		0
Uranium-236	(pCi/L)		216	138	2.63	0.28	0.759855	NR		NA

Table 4.45 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Uranium-238	(pCi/L)		216	215	91.7		0.63		22.72819	24		64
Technetium-99	(pCi/L)		25	16	490		9.57		77.09813	4000		0
Gross Alpha	(pCi/L)		14	9	31		3.23		10.28889	15	f	1
Gross Beta	(pCi/L)		36	31	292		2.34		52.72903	50	a	11
1,1,1-Trichloroethane	(µg/L)		35	1	2	J	2	J	2	200		0
1,1-Dichloroethane	(µg/L)		35	4	11		1	J	4.75	NR		NA
1,1-Dichloroethene	(µg/L)		35	3	4	J	1	J	2.333333	7		0
1,2-Dichloroethene (Total)	(µg/L)		12	1	1	J	1	J	1	NR	b	NA
Chloroform	(µg/L)		35	1	3	J	3	J	3	100	i	0
cis-1,2-Dichloroethene	(µg/L)		35	14	96		1	J	18.42857	70		2
Tetrachloroethene	(µg/L)		35	12	34		1	J	6.916667	5		4
Trichloroethene	(µg/L)		35	11	29		1	J	5	5		2
Vinyl chloride	(µg/L)		35	1	4		4		4	2		1

Table 4.46. REGIME=BC AREA NAME=Oil Landfarm Waste Management Area

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		28	28	130	1.13	49.57357	250		0
Fluoride	(mg/L)		28	10	0.56	0.109	0.2883	4		0
Nitrate Nitrogen	(mg/L)		28	18	515	0.0587	69.61988	10		9
Sulfate	(mg/L)		28	28	80	4.58	27.91607	250		0
Aluminum, ICAP	(mg/L)		28	3	6.03	0.574	3.054667	0.2		3
Antimony, PMS	(mg/L)		28	4	0.00331	0.00274	0.002988	0.006		0
Antimony, ICAP	(mg/L)		28	28	0.2	0.2	0.2	0.006		28
Arsenic, PMS	(mg/L)		28	2	0.0093	0.0091	0.0092	0.05	j	0
Arsenic, ICAP	(mg/L)		28	28	0.2	0.2	0.2	0.05	j	28
Barium, ICAP	(mg/L)		28	28	1.98	0.0229	0.404025	2		0
Beryllium, ICAP	(mg/L)		28	1	0.000533	0.000533	0.000533	0.004		0
Boron, ICAP	(mg/L)		28	14	3.56	0.109	0.625857	NR		NA
Cadmium, ICAP	(mg/L)		28	28	0.01	0.01	0.01	0.005		28
Calcium, ICAP	(mg/L)		28	28	731	8.77	161.7575	NR		NA
Chromium, PMS	(mg/L)		28	1	0.01	0.01	0.01	NR		NA
Chromium, ICAP	(mg/L)		28	14	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		28	24	27.4	0.0734	5.165833	0.3		18
Lead, PMS	(mg/L)		28	7	0.0239	0.00057	0.006059	0.015	c	1
Lead, ICAP	(mg/L)		28	28	0.1	0.1	0.1	0.015	c	28
Lithium, ICAP	(mg/L)		28	26	0.121	0.0105	0.031	NR		NA
Magnesium, ICAP	(mg/L)		28	28	60.7	1.85	28.55536	NR		NA
Manganese, ICAP	(mg/L)		28	25	6.22	0.00604	0.83029	0.05		14
Nickel, PMS	(mg/L)		28	14	0.059	0.00553	0.023943	NR		NA
Nickel, ICAP	(mg/L)		28	15	0.054	0.05	0.050267	0.1	d	0

Table 4.46 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Niobium, ICAP	(mg/L)		28	28	0.2	0.2	0.2	NR	NA
Phosphorus, ICAP	(mg/L)		28	28	1.18	0.5	0.524286	NR	NA
Potassium, ICAP	(mg/L)		28	26	12.8	2.59	4.676538	NR	NA
Selenium, ICAP	(mg/L)		28	28	0.2	0.2	0.2	0.05	28
Silicon, ICAP	(mg/L)		28	28	12.1	1.19	7.245	NR	NA
Sodium, ICAP	(mg/L)		28	28	79.8	0.593	22.54454	NR	NA
Strontium, ICAP	(mg/L)		28	28	2.23	0.0281	0.821582	NR	NA
Sulfur, ICAP	(mg/L)		28	28	28.1	1.46	9.545714	NR	NA
Thallium, PMS	(mg/L)		28	2	0.00104	0.00079	0.000915	0.002	0
Thallium, ICAP	(mg/L)		28	28	0.2	0.2	0.2	NR	NA
Titanium, ICAP	(mg/L)		28	28	0.151	0.05	0.054929	NR	NA
Uranium, PMS	(mg/L)		28	22	0.187	0.00053	0.021834	0.03	4
Uranium, ICAP	(mg/L)		28	28	2	2	2	NR	NA
Zinc, ICAP	(mg/L)		28	1	0.0942	0.0942	0.0942	5	0
Zirconium, ICAP	(mg/L)		28	28	0.2	0.2	0.2	NR	NA
Static Water Level	(ft - toc)		30	NA	71.53	5.87	21.03967	NR	NA
Alkalinity as HCO3	(mg/L)		28	28	598	52.8	310.0393	NR	NA
Conductivity	(µmhos/cm)		28	28	4900	181	1129	NR	NA
Dissolved Solids	(mg/L)		28	28	3380	107	711	500	19
pH	(pH)		28	28	9.59	6.24	7.148214	6.5/8.5	7
Total Suspended Solids	(mg/L)		28	14	82	1.5	15.71429	NR	NA
Turbidity	(NTU)		28	28	302	0.271	36.01954	1	21
Uranium-234	(pCi/L)		4	3	12	0.68	7.893333	20	0
Uranium-235	(wt %)		16	16	0.79	0.36	0.580125	NR	NA
Uranium-235	(pCi/L)		4	2	0.68	0.63	0.655	24	0

Table 4.46 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Uranium-236	(pCi/L)		2	1	0.17		0.17		0.17	NR		NA
Uranium-238	(pCi/L)		4	3	17		0.25		11.08333	24		0
Technetium-99	(pCi/L)		4	1	15		15		15	4000		0
Gross Alpha	(pCi/L)		30	12	63		1.73		16.7075	15	f	4
Gross Beta	(pCi/L)		30	20	510		3.61		64.1955	50	a	3
1,1,1-Trichloroethane	(µg/L)		30	2	4		1	J	2.5	200		0
1,1-Dichloroethane	(µg/L)		30	9	15		1	J	7	NR		NA
1,1-Dichloroethene	(µg/L)		30	11	27		1	J	8.363636	7		3
1,2-Dichloroethene (Total)	(µg/L)		28	17	240		1	J	29.05882	NR	b	NA
1,2-Dichloropropane	(µg/L)		30	2	1	J	1	J	1	5		0
1,4-Dichlorobenzene	(µg/L)		28	2	4	J	3		3.5	75		0
2-Butanone	(µg/L)		30	1	9		9		9	NR		NA
Acetone	(µg/L)		30	2	21		5	J	13	NR		NA
Benzene	(µg/L)		30	4	8		1	J	4	5		2
Carbon tetrachloride	(µg/L)		30	5	4	J	1	J	2.2	5		0
Chlorobenzene	(µg/L)		30	3	14		2	J	9	100		0
Chloroethane	(µg/L)		30	1	2	J	2	J	2	NR		NA
Chloroform	(µg/L)		30	3	2	J	2	J	2	100	i	0
cis-1,2-Dichloroethene	(µg/L)		30	19	240		1	J	28.94737	70		2
Tetrachloroethene	(µg/L)		30	9	65		1	J	10.22222	5		2
trans-1,2-Dichloroethene	(µg/L)		30	1	1	J	1	J	1	100		0
Trichloroethene	(µg/L)		30	22	240		2	J	51.59091	5		19
Vinyl chloride	(µg/L)		30	4	41		5		20.25	2		4

Table 4.47. REGIME=BC AREA NAME=Rust Spoil Area

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		8	8	53.1	1	17.78	250		0
Fluoride	(mg/L)		8	3	0.222	0.121	0.188333	4		0
Nitrate Nitrogen	(mg/L)		8	8	7.27	0.291	2.141375	10		0
Sulfate	(mg/L)		8	8	83.8	3	36.15375	250		0
Aluminum, ICAP	(mg/L)		8	2	0.614	0.417	0.5155	0.2		2
Antimony, ICAP	(mg/L)		8	8	0.2	0.2	0.2	0.006		8
Arsenic, ICAP	(mg/L)		8	8	0.2	0.2	0.2	0.05	j	8
Barium, ICAP	(mg/L)		8	7	0.0745	0.0055	0.046357	2		0
Cadmium, ICAP	(mg/L)		8	8	0.01	0.01	0.01	0.005		8
Calcium, ICAP	(mg/L)		8	8	163	11.5	101.0125	NR		NA
Chromium, PMS	(mg/L)		8	2	0.0176	0.0121	0.01485	NR		NA
Chromium, ICAP	(mg/L)		8	8	0.02	0.02	0.02	0.1		0
Lead, ICAP	(mg/L)		8	8	0.1	0.1	0.1	0.015	c	8
Magnesium, ICAP	(mg/L)		8	8	16.3	0.587	9.443375	NR		NA
Manganese, ICAP	(mg/L)		8	2	0.425	0.0103	0.21765	0.05		1
Nickel, PMS	(mg/L)		8	4	0.0114	0.0052	0.00726	NR		NA
Nickel, ICAP	(mg/L)		8	8	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		8	8	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		8	8	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		8	6	8.38	3.08	5.225	NR		NA
Selenium, ICAP	(mg/L)		8	8	0.2	0.2	0.2	0.05		8
Silicon, ICAP	(mg/L)		8	8	8.31	1.69	4.75375	NR		NA
Sodium, ICAP	(mg/L)		8	8	23	3.93	12.9975	NR		NA
Strontium, ICAP	(mg/L)		8	8	0.36	0.0835	0.203225	NR		NA

Table 4.47 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Sulfur, ICAP	(mg/L)		8	8	30.9		0.993		12.86663	NR		NA
Thallium, PMS	(mg/L)		8	1	0.000595		0.000595		0.000595	0.002		0
Thallium, ICAP	(mg/L)		8	8	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		8	8	0.05		0.05		0.05	NR		NA
Uranium, PMS	(mg/L)		8	7	0.00399		0.00064		0.001854	0.03		0
Uranium, ICAP	(mg/L)		8	8	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		8	8	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		8	NA	39.46		21.08		32.065	NR		NA
Alkalinity as HCO3	(mg/L)		8	8	355		62.7		246.1375	NR		NA
Conductivity	(µmhos/cm)		8	8	925		110		598.5	NR		NA
Dissolved Solids	(mg/L)		8	8	551		80		354.875	500		3
pH	(pH)		8	8	9.95		6.33		7.45125	6.5/8.5		3
Turbidity	(NTU)		8	8	0.774		0.107		0.301375	1		0
Uranium-235	(wt %)		4	4	0.98		0.79		0.8825	NR		NA
Technetium-99	(pCi/L)		2	2	19		16		17.5	4000		0
Gross Alpha	(pCi/L)		8	1	2.4		2.4		2.4	15	f	0
Gross Beta	(pCi/L)		8	5	18		7.2		12	50	a	0
1,1-Dichloroethane	(µg/L)		8	2	2	J	2	J	2	NR		NA
1,2-Dichloroethene (Total)	(µg/L)		8	2	6		5	J	5.5	NR	b	NA
Chloroform	(µg/L)		8	2	1	J	1	J	1	100	i	0
cis-1,2-Dichloroethene	(µg/L)		8	2	6		5	J	5.5	70		0
Tetrachloroethene	(µg/L)		8	3	2	J	2	J	2	5		0
Trichloroethene	(µg/L)		8	8	40		3	J	16.875	5		5

Table 4.48. REGIME=BC AREA NAME=S-3 Site

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Bicarbonate	(mg/L)		2	2	48.7	41.7	45.2	NR		NA
Chloride	(mg/L)		20	20	263	16.5	108.86	250		4
Fluoride	(mg/L)		20	11	13.1	0.1	2.083182	4		2
Nitrate Nitrogen	(mg/L)		18	17	4350	0.136	1352.149	10		16
Nitrate/Nitrite	(mg/L)		4	4	1640	25.6	784.925	NR		NA
Sulfate	(mg/L)		20	20	91.6	3.2	23.3525	250		0
Aluminum, ICAP	(mg/L)		18	2	11	10.6	10.8	0.2		2
Antimony, PMS	(mg/L)		18	1	0.00326	0.00326	0.00326	0.006		0
Antimony, ICAP	(mg/L)		18	18	4	0.2	1.077778	0.006		18
Arsenic, PMS	(mg/L)		18	2	0.0412	0.0115	0.02635	0.05	j	0
Arsenic, ICAP	(mg/L)		18	18	4	0.2	1.077778	0.05	j	18
Barium, ICAP	(mg/L)		18	18	138	0.0363	22.27311	2		8
Beryllium, ICAP	(mg/L)		18	2	0.021	0.0179	0.01945	0.004		2
Boron, ICAP	(mg/L)		18	6	0.895	0.152	0.501333	NR		NA
Cadmium, PMS	(mg/L)		18	6	1.08	0.00495	0.360708	0.005		5
Cadmium, ICAP	(mg/L)		18	18	1.15	0.01	0.157778	0.005		18
Calcium, ICAP	(mg/L)		18	18	5060	2.15	1523.296	NR		NA
Chromium, PMS	(mg/L)		18	1	0.0132	0.0132	0.0132	NR		NA
Chromium, ICAP	(mg/L)		18	13	0.4	0.02	0.076923	0.1		3
Cobalt, ICAP	(mg/L)		18	2	0.536	0.489	0.5125	NR		NA
Iron, ICAP	(mg/L)		18	7	2.35	0.0579	0.759271	0.3		4
Lead, PMS	(mg/L)		18	6	0.012	0.00055	0.004414	0.015	c	0
Lead, ICAP	(mg/L)		18	18	2	0.1	0.538889	0.015	c	18
Lithium, ICAP	(mg/L)		18	14	0.989	0.0256	0.320471	NR		NA

Table 4.48 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Magnesium, ICAP	(mg/L)		18	18	889	0.755	271.1295	NR		NA
Manganese, ICAP	(mg/L)		18	17	180	0.00611	25.23458	0.05		14
Nickel, PMS	(mg/L)		18	11	2.26	0.00508	0.487831	NR		NA
Nickel, ICAP	(mg/L)		18	14	2.6	0.05	0.471429	0.1	d	4
Niobium, ICAP	(mg/L)		18	18	4	0.2	1.077778	NR		NA
Phosphorus, ICAP	(mg/L)		18	18	10	0.5	2.694444	NR		NA
Potassium, ICAP	(mg/L)		18	15	44.2	2.34	16.63267	NR		NA
Selenium, PMS	(mg/L)		18	2	0.183	0.0446	0.1138	0.05		1
Selenium, ICAP	(mg/L)		18	18	4	0.2	1.077778	0.05		18
Silicon, ICAP	(mg/L)		18	18	11.7	1.45	6.775556	NR		NA
Sodium, ICAP	(mg/L)		18	18	505	18	192.0278	NR		NA
Strontium, ICAP	(mg/L)		18	18	21.8	0.252	9.1385	NR		NA
Sulfur, ICAP	(mg/L)		18	18	33	2.36	10.12611	NR		NA
Thallium, PMS	(mg/L)		18	2	0.000795	0.00072	0.000758	0.002		0
Thallium, ICAP	(mg/L)		18	18	4	0.2	1.077778	NR		NA
Titanium, ICAP	(mg/L)		18	18	1	0.05	0.269444	NR		NA
Uranium, PMS	(mg/L)		18	16	0.0478	0.00132	0.012683	0.03		1
Uranium, ICAP	(mg/L)		18	18	40	2	10.77778	NR		NA
Zirconium, ICAP	(mg/L)		18	18	4	0.2	1.077778	NR		NA
Static Water Level	(ft - toc)		22	NA	20.05	5.18	13.56682	NR		NA
Alkalinity as CO3	(mg/L)		18	2	60.1	49	54.55	NR		NA
Alkalinity as HCO3	(mg/L)		18	18	529	42.6	302.8444	NR		NA
Conductivity	(µmhos/cm)		18	18	24100	644	8026.222	NR		NA
Dissolved Solids	(mg/L)		20	20	27200	521	8270.85	500		20
pH	(pH)		18	18	9.84	5.5	6.687222	6.5/8.5		11

Table 4.48 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Total Suspended Solids	(mg/L)		20	8	11.9		2		6.8375	NR		NA
Turbidity	(NTU)		18	18	22.6		0.126		2.921778	1		6
Uranium-233/234	(pCi/L)		4	2	77.6		69.9		73.75	NR		NA
Uranium-234	(pCi/L)		14	11	6.7		0.42		3.456364	20		0
Uranium-235	(wt %)		16	16	0.76		0.33		0.478063	NR		NA
Uranium-235	(pCi/L)		18	3	5.29		0.22		3.556667	24		0
Uranium-236	(pCi/L)		11	4	9.51		0.056	R	4.219	NR		NA
Neptunium-237	(pCi/L)		2	2	10.1		9.02		9.56	1.2		2
Uranium-238	(pCi/L)		18	14	178		0.56		27.99286	24		2
Technetium-99	(pCi/L)		20	15	9400		19		2981.4	4000		4
Gross Alpha	(pCi/L)		22	5	268		7.8		97.98	15	f	2
Gross Beta	(pCi/L)		22	14	5500		15		1490.071	50	a	11
Radium - Total Alpha	(pCi/L)		2	2	2.14		2.11		2.125	5	g	0
Benzene	(µg/L)		22	1	1	J	1	J	1	5		0
Chloroform	(µg/L)		22	8	24		2	J	10.375	100	i	0
Methylene chloride	(µg/L)		22	6	7		5		6.666667	5		5
Tetrachloroethene	(µg/L)		22	10	30		1	J	9.9	5		7

Table 4.49. REGIME=BC AREA NAME=Spoil Area I

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		4	4	14.2	2.69	8.3225	250		0
Nitrate Nitrogen	(mg/L)		4	4	5.64	0.949	3.43475	10		0
Sulfate	(mg/L)		4	4	66.6	6.63	36.08	250		0
Antimony, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.006		4
Arsenic, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.05	j	4
Barium, ICAP	(mg/L)		4	4	0.07	0.026	0.047725	2		0
Cadmium, ICAP	(mg/L)		4	4	0.01	0.01	0.01	0.005		4
Calcium, ICAP	(mg/L)		4	4	134	99	115.775	NR		NA
Chromium, ICAP	(mg/L)		4	4	0.02	0.02	0.02	0.1		0
Lead, ICAP	(mg/L)		4	4	0.1	0.1	0.1	0.015	c	4
Magnesium, ICAP	(mg/L)		4	4	24.8	15.9	20.4	NR		NA
Manganese, ICAP	(mg/L)		4	2	0.12	0.102	0.111	0.05		2
Nickel, PMS	(mg/L)		4	1	0.00624	0.00624	0.00624	NR		NA
Nickel, ICAP	(mg/L)		4	4	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		4	4	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		4	2	3.8	3.76	3.78	NR		NA
Selenium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.05		4
Silicon, ICAP	(mg/L)		4	4	5.6	5.22	5.385	NR		NA
Sodium, ICAP	(mg/L)		4	4	9.05	1.6	5.1275	NR		NA
Strontium, ICAP	(mg/L)		4	4	0.227	0.0791	0.152425	NR		NA
Sulfur, ICAP	(mg/L)		4	4	24.3	2.23	13.155	NR		NA
Thallium, PMS	(mg/L)		4	1	0.00064	0.00064	0.00064	0.002		0
Thallium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR		NA

Table 4.49 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Titanium, ICAP	(mg/L)		4	4	0.05		0.05		0.05	NR		NA
Uranium, PMS	(mg/L)		4	3	0.00264		0.000755		0.001972	0.03		0
Uranium, ICAP	(mg/L)		4	4	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		4	4	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		4	NA	73.18		58.95		65.7075	NR		NA
Alkalinity as HCO3	(mg/L)		4	4	348		285		311.75	NR		NA
Conductivity	(µmhos/cm)		4	4	848		460		665	NR		NA
Dissolved Solids	(mg/L)		4	4	440		320		387	500		0
pH	(pH)		4	4	7.03		6.67		6.8675	6.5/8.5		0
Turbidity	(NTU)		4	4	0.264		0.194		0.23425	1		0
Uranium-235	(wt %)		2	2	0.61		0.5		0.555	NR		NA
Gross Beta	(pCi/L)		4	2	24		21		22.5	50	a	0
1,2-Dichloroethene (Total)	(µg/L)		4	1	1	J	1	J	1	NR	b	NA
cis-1,2-Dichloroethene	(µg/L)		4	1	1	J	1	J	1	70		0
Tetrachloroethene	(µg/L)		4	4	9		4	J	7	5		3
Trichloroethene	(µg/L)		4	4	4	J	1	J	2.75	5		0

Table 4.50. REGIME=CR AREA NAME=Chestnut Ridge Borrow Area Waste Pile

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Static Water Level	(ft - toc)		2	NA	133.28	124.36	128.82	NR	NA
Dissolved Solids	(mg/L)		2	2	227	210	218.5	500	0

Table 4.51. REGIME=CR AREA NAME=Chestnut Ridge Security Pits

COMPOUND	UNITS	FILTERED STATUS	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	140		130		135	NR		NA
Chloride	(mg/L)		2	2	1.8	J	0.97	J	1.385	250		0
Fluoride	(mg/L)		2	1	0.12	J	0.12	J	0.12	4		0
Nitrate Nitrogen	(mg/L)		2	2	0.75		0.66		0.705	10		0
Sulfate	(mg/L)		2	2	3	J	2.5	J	2.75	250		0
Static Water Level	(ft - toc)		6	NA	126.78		18.32		88.16	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	140		130		135	NR		NA
Conductivity	(µmhos/cm)		2	2	270		240		255	NR		NA
Dissolved Solids	(mg/L)		6	6	262		120		186.3333	500		0
pH	(pH)		2	2	7.9		7.8		7.85	6.5/8.5		0
Total Suspended Solids	(mg/L)		6	1	2	J	2	J	2	NR		NA
Turbidity	(NTU)		2	1	0.36		0.36		0.36	1		0
Gross Alpha	(pCi/L)		6	4	4.47		1.24		2.245	15	f	0
Gross Beta	(pCi/L)		6	2	4.59		3.45		4.02	50	a	0
1,1,1-Trichloroethane	(µg/L)		6	4	5	J	0.81	J	2.8025	200		0
1,1-Dichloroethane	(µg/L)		6	4	8		0.97	J	4.0925	NR		NA
1,1-Dichloroethene	(µg/L)		6	3	2.3		0.43	J	1.576667	7		0
Acetone	(µg/L)		6	1	4	J	4	J	4	NR		NA
cis-1,2-Dichloroethene	(µg/L)		6	2	3.8		2.3		3.05	70		0
Tetrachloroethene	(µg/L)		6	2	4.8		3.2		4	5		0
trans-1,2-Dichloroethene	(µg/L)		6	1	0.31	J	0.31	J	0.31	100		0
Trichloroethene	(µg/L)		6	2	0.47	J	0.3	J	0.385	5		0
Trichlorofluoromethane	(µg/L)		2	2	7.5		3.8		5.65	NR		NA

Table 4.52. REGIME=CR AREA NAME=Chestnut Ridge Sediment Disposal Basin

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Static Water Level	(ft - toc)		4	NA	157.4	116.86	135.4025	NR	NA
Dissolved Solids	(mg/L)		4	4	373	169	243	500	0
Total Suspended Solids	(mg/L)		4	2	12.7	7.5	10.1	NR	NA

Table 4.53. REGIME=CR AREA NAME=Construction/Demolition Landfill VI

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Alkalinity	(mg/L)		8	8	240		68		182.25	NR		NA
Chloride	(mg/L)		8	8	12		0.77	J	3.91375	250		0
Nitrate Nitrogen	(mg/L)		8	8	0.53		0.073	J	0.266625	10		0
Sulfate	(mg/L)		8	8	76		1.1	J	19.9875	250		0
Static Water Level	(ft - toc)		8	NA	70.29		36.3		56.9175	NR		NA
Alkalinity as HCO3	(mg/L)		8	8	240		68		182.25	NR		NA
Conductivity	(µmhos/cm)		8	8	610		140		375	NR		NA
Dissolved Solids	(mg/L)		8	8	370		89		207.375	500		0
pH	(pH)		8	8	7.8		6.7		7.375	6.5/8.5		0
Total Suspended Solids	(mg/L)		8	1	2	J	2	J	2	NR		NA
Turbidity	(NTU)		8	8	0.69		0.06	J	0.22625	1		0
Gross Beta	(pCi/L)		8	1	3.4		3.4		3.4	50	a	0
Chloroform	(µg/L)		8	2	12		7.2		9.6	100	i	0

Table 4.54. REGIME=CR AREA NAME=Construction/Demolition Landfill VII

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Alkalinity	(mg/L)		6	6	200		140		168.3333	NR	NA
Chloride	(mg/L)		6	6	2.4	J	1	J	1.666667	250	0
Fluoride	(mg/L)		6	2	0.12	J	0.12	J	0.12	4	0
Nitrate Nitrogen	(mg/L)		6	6	0.46	J	0.16	J	0.268333	10	0
Sulfate	(mg/L)		6	6	3.6	J	1.5	J	2.6	250	0
Static Water Level	(ft - toc)		6	NA	42.14		1.26		17.285	NR	NA
Alkalinity as HCO3	(mg/L)		6	6	200		140		168.3333	NR	NA
Conductivity	(µmhos/cm)		6	6	370		270		313.3333	NR	NA
Dissolved Solids	(mg/L)		6	6	200		140		166.6667	500	0
pH	(pH)		6	6	7.7		7.3		7.533333	6.5/8.5	0
Total Suspended Solids	(mg/L)		6	2	5.6		2.8	J	4.2	NR	NA
Turbidity	(NTU)		6	6	8.4		0.11		2.77	1	2
2-Butanone	(µg/L)		6	3	8.4	Q	7	Q	7.8	NR	NA
Acetone	(µg/L)		6	2	6.4	J	4	J	5.2	NR	NA
Chloroethane	(µg/L)		6	1	0.69	J	0.69	J	0.69	NR	NA
Chloromethane	(µg/L)		6	2	5.5	Q	0.82	J	3.16	NR	NA

Table 4.55. REGIME=CR AREA NAME=Exit Pathway Spring/Surface Water

COMPOUND	UNITS	FILTERED STATUS	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	96		80	88	NR		NA
Bicarbonate	(mg/L)		7	7	185		111	150.1429	NR		NA
Chloride	(mg/L)		19	19	2.4	J	1.4	1.767895	250		0
Fluoride	(mg/L)		19	7	0.16		0.118	0.135429	4		0
Nitrate Nitrogen	(mg/L)		12	12	2.76		0.0655	0.809792	10		0
Nitrate/Nitrite	(mg/L)		3	3	0.25		0.038	0.136	NR		NA
Sulfate	(mg/L)		19	19	25.5		3.6	9.844737	250		0
Aluminum, ICAP	(mg/L)		10	5	1.56		0.204	0.5436	0.2		5
Antimony, ICAP	(mg/L)		10	10	0.2		0.2	0.2	0.006		10
Arsenic, ICAP	(mg/L)		10	10	0.2		0.2	0.2	0.05	j	10
Barium, ICAP	(mg/L)		10	10	0.0806		0.0209	0.04845	2		0
Cadmium, ICAP	(mg/L)		10	10	0.01		0.01	0.01	0.005		10
Calcium, ICAP	(mg/L)		10	10	54.2		23.5	40.96	NR		NA
Iron, ICAP	(mg/L)		10	8	1.3		0.0788	0.2899	0.3		1
Lead, PMS	(mg/L)		10	1	0.00194		0.00194	0.00194	0.015	c	0
Lead, ICAP	(mg/L)		10	10	0.1		0.1	0.1	0.015	c	10
Lithium, ICAP	(mg/L)		10	2	0.0211		0.0138	0.01745	NR		NA
Magnesium, ICAP	(mg/L)		10	10	21.9		6.73	13.427	NR		NA
Manganese, ICAP	(mg/L)		10	7	0.0546		0.00557	0.021909	0.05		1
Niobium, ICAP	(mg/L)		10	10	0.2		0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		10	10	0.5		0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		10	2	2.36		2.15	2.255	NR		NA
Selenium, ICAP	(mg/L)		10	10	0.2		0.2	0.2	0.05		10
Silicon, ICAP	(mg/L)		10	10	6.15		3.33	4.396	NR		NA

Table 4.55 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Sodium, ICAP	(mg/L)		10	10	1.47		0.805		1.1295	NR		NA
Strontium, ICAP	(mg/L)		10	10	0.297		0.0263		0.08893	NR		NA
Sulfur, ICAP	(mg/L)		10	10	3.59		1.51		2.194	NR		NA
Thallium, ICAP	(mg/L)		10	10	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		10	10	0.05		0.05		0.05	NR		NA
Uranium, PMS	(mg/L)		10	5	0.00408		0.00064		0.001558	0.03		0
Uranium, ICAP	(mg/L)		10	10	2		2		2	NR		NA
Zinc, ICAP	(mg/L)		10	1	0.0541		0.0541		0.0541	5		0
Zirconium, ICAP	(mg/L)		10	10	0.2		0.2		0.2	NR		NA
Alkalinity as HCO3	(mg/L)		12	12	215		80		136.7833	NR		NA
Conductivity	(µmhos/cm)		12	12	414		179		277.9167	NR		NA
Dissolved Solids	(mg/L)		19	19	227		58	Q	154.3158	500		0
pH	(pH)		12	12	7.91		6.7		7.340833	6.5/8.5		0
Total Suspended Solids	(mg/L)		19	12	21		2		7.008333	NR		NA
Turbidity	(NTU)		12	12	51		0.886		10.8155	1		11
Gross Alpha	(pCi/L)		19	4	3.72		1.15		2.24	15	f	0
Gross Beta	(pCi/L)		19	7	7.95		5.38		6.842857	50	a	0

Table 4.56. REGIME=CR AREA NAME=Industrial Landfill II

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Alkalinity	(mg/L)		6	6	240		110		180	NR		NA
Chloride	(mg/L)		6	6	3.1		1.6	J	2.15	250		0
Fluoride	(mg/L)		6	2	1.7		1.5		1.6	4		0
Nitrate Nitrogen	(mg/L)		6	6	0.25	J	0.024	J	0.118667	10		0
Sulfate	(mg/L)		6	6	17		3.2	J	10.66667	250		0
Static Water Level	(ft - toc)		6	NA	84.5		28.37		64.03667	NR		NA
Alkalinity as CO3	(mg/L)		6	3	65		5.9		44.63333	NR		NA
Alkalinity as HCO3	(mg/L)		6	6	240		46		157.3333	NR		NA
Conductivity	(µmhos/cm)		6	6	450		290		366.6667	NR		NA
Dissolved Solids	(mg/L)		6	6	230		150		185	500		0
pH	(pH)		6	6	10		7.8		8.7	6.5/8.5		2
Total Suspended Solids	(mg/L)		6	3	2.8	J	1.2	J	1.866667	NR		NA
Turbidity	(NTU)		6	6	0.32		0.05	J	0.171667	1		0
Gross Alpha	(pCi/L)		6	1	2		2		2	15	f	0
Gross Beta	(pCi/L)		6	3	18.3		2.4		12.16667	50	a	0
2-Butanone	(µg/L)		6	1	7.4	Q	7.4	Q	7.4	NR		NA

Table 4.57. REGIME=CR AREA NAME=Industrial Landfill IV

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Alkalinity	(mg/L)		11	11	210		150		180	NR		NA
Chloride	(mg/L)		11	11	9.2	J	1.1	J	3.536364	250		0
Fluoride	(mg/L)		11	1	0.12	J	0.12	J	0.12	4		0
Nitrate Nitrogen	(mg/L)		11	11	0.52		0.17	J	0.391818	10		0
Sulfate	(mg/L)		11	10	6		2.2	J	3.92	250		0
Static Water Level	(ft - toc)		11	NA	124.83		80.5		102.5473	NR		NA
Alkalinity as CO3	(mg/L)		11	2	6.5		4		5.25	NR		NA
Alkalinity as HCO3	(mg/L)		11	11	210		140		179.0909	NR		NA
Conductivity	(µmhos/cm)		11	11	390		280		343.6364	NR		NA
Dissolved Solids	(mg/L)		11	11	210		140		177.2727	500		0
pH	(pH)		11	11	8.4		7.2		7.854545	6.5/8.5		0
Total Suspended Solids	(mg/L)		11	2	3.2	J	2.8	J	3	NR		NA
Turbidity	(NTU)		11	11	4.9		0.05	J	1.58	1		5
Gross Alpha	(pCi/L)		11	1	4.9		4.9		4.9	15	f	0
Gross Beta	(pCi/L)		11	3	2.8		1.57		2.323333	50	a	0
1,1,1-Trichloroethane	(µg/L)		11	3	17		11		15	200		0
1,1-Dichloroethane	(µg/L)		11	3	20		13		17	NR		NA
1,1-Dichloroethene	(µg/L)		11	4	5.8		0.19	J	3.5225	7		0
2-Butanone	(µg/L)		11	2	6.5	Q	2.6	J	4.55	NR		NA
Bromoform	(µg/L)		11	1	0.38	J	0.38	J	0.38	100	i	0
Chloromethane	(µg/L)		11	1	0.98	J	0.98	J	0.98	NR		NA
Toluene	(µg/L)		11	1	0.26	J	0.26	J	0.26	1000		0

Table 4.58. REGIME=CR AREA NAME=Industrial Landfill V

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Alkalinity	(mg/L)		10	10	190		120		153	NR		NA
Chloride	(mg/L)		10	10	6.1	J	1.1	J	2.6	250		0
Fluoride	(mg/L)		10	2	0.17	J	0.13	J	0.15	4		0
Nitrate Nitrogen	(mg/L)		10	10	1.7		0.08	J	0.695	10		0
Sulfate	(mg/L)		10	10	46		0.72	J	11.082	250		0
Uranium	(mg/L)		8	2	0.98	J	0.563	J	0.7515	NR	h	NA
Static Water Level	(ft - toc)		10	NA	120.29		13.77		74.447	NR		NA
Alkalinity as CO3	(mg/L)		10	2	3.9	J	2.5	J	3.2	NR		NA
Alkalinity as HCO3	(mg/L)		10	10	190		120		153	NR		NA
Conductivity	(µmhos/cm)		10	10	440		230		309	NR		NA
Dissolved Solids	(mg/L)		10	10	260		120		162	500		0
pH	(pH)		10	10	8.4		7.8		8.03	6.5/8.5		0
Total Suspended Solids	(mg/L)		10	2	5.6		5.2		5.4	NR		NA
Turbidity	(NTU)		10	10	8.6		0.29		1.869	1		3
Gross Alpha	(pCi/L)		10	1	1.8		1.8		1.8	15	f	0
Gross Beta	(pCi/L)		10	2	2.6		1.68		2.14	50	a	0
1,1,1-Trichloroethane	(µg/L)		10	2	0.64	J	0.4	J	0.52	200		0
Bromoform	(µg/L)		10	1	0.58	J	0.58	J	0.58	100	i	0
Chlorodibromomethane	(µg/L)		10	1	0.24	J	0.24	J	0.24	100	i	0
Chloromethane	(µg/L)		10	1	0.98	J	0.98	J	0.98	NR		NA

Table 4.59. REGIME=CR AREA NAME=Kerr Hollow Quarry

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Static Water Level	(ft - toc)		4	NA	78.22		12		47.255	NR		NA
Dissolved Solids	(mg/L)		4	4	320		175		254.25	500		0
Gross Alpha	(pCi/L)		4	4	10.3		1.5		4.47	15	f	0
Gross Beta	(pCi/L)		4	4	25.7		3.25		14.8875	50	a	0
Acetone	(µg/L)		4	1	6	J	6	J	6	NR		NA

Table 4.60. REGIME=CR AREA NAME=United Nuclear Corporation Site

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Bicarbonate	(mg/L)		8	8	280	66.3	167.175	NR		NA
Carbonate	(mg/L)		8	2	90.8	61.9	76.35	NR		NA
Chloride	(mg/L)		8	8	20	1.4	5.75	250		0
Nitrate/Nitrite	(mg/L)		8	8	1.3	0.047	0.64875	NR		NA
Sulfate	(mg/L)		8	8	3.5	0.64	2.1025	250		0
Static Water Level	(ft - toc)		8	NA	73.97	48.95	65.29	NR		NA
Dissolved Solids	(mg/L)		8	8	317	100	202.375	500		0
Total Suspended Solids	(mg/L)		8	3	8.1	5.2	6.466667	NR		NA
Uranium-233/234	(pCi/L)		8	7	2.45	0.59	1.16	NR		NA
Uranium-236	(pCi/L)		8	1	0.42	0.42	0.42	NR		NA
Uranium-238	(pCi/L)		8	4	0.64	0.36	0.49	24		0
Potassium-40	(pCi/L)		1	1	76.3	76.3	76.3	280		0
Gross Alpha	(pCi/L)		8	5	3.07	1.93	2.408	15	f	0
Gross Beta	(pCi/L)		8	7	68.7	2.34	20.77286	50	a	2

Table 4.61. REGIME=EF AREA NAME=Building 81-10

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		2	2	20.1	18.3	19.2	250		0
Nitrate Nitrogen	(mg/L)		2	2	158	124	141	10		2
Sulfate	(mg/L)		2	2	60.1	53.4	56.75	250		0
Aluminum, ICAP	(mg/L)		2	2	1.48	0.388	0.934	0.2		2
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05	j	2
Barium, ICAP	(mg/L)		2	2	0.228	0.202	0.215	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	243	212	227.5	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		2	2	1.23	0.27	0.75	0.3		1
Lead, PMS	(mg/L)		2	1	0.00235	0.00235	0.00235	0.015	c	0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Magnesium, ICAP	(mg/L)		2	2	71.1	66.8	68.95	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.399	0.19	0.2945	0.05		2
Mercury, CVAA	(mg/L)		2	2	0.00382	0.00109	0.002455	0.002		1
Nickel, PMS	(mg/L)		2	1	0.00639	0.00639	0.00639	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	2	3.63	3.53	3.58	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	7.28	5.5	6.39	NR		NA
Sodium, ICAP	(mg/L)		2	2	25	22.3	23.65	NR		NA

Table 4.61 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Strontium, ICAP	(mg/L)		2	2	0.713		0.596		0.6545	NR		NA
Sulfur, ICAP	(mg/L)		2	2	21.4		17.6		19.5	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05		0.05		0.05	NR		NA
Uranium, PMS	(mg/L)		2	1	0.00106		0.00106		0.00106	0.03		0
Uranium, ICAP	(mg/L)		2	2	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		2	NA	42.45		38.24		40.345	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	277		259		268	NR		NA
Conductivity	(µmhos/cm)		2	2	1787		1398		1592.5	NR		NA
Dissolved Solids	(mg/L)		2	2	1240		1170		1205	500		2
pH	(pH)		2	2	7		6.95		6.975	6.5/8.5		0
Total Suspended Solids	(mg/L)		2	2	19		6		12.5	NR		NA
Turbidity	(NTU)		2	2	22.5		7.91		15.205	1		2
1,2-Dichloroethene (Total)	(µg/L)		2	2	34		23		28.5	NR	b	NA
1,2-Dichloropropane	(µg/L)		2	1	1	J	1	J	1	5		0
Carbon tetrachloride	(µg/L)		2	2	12		7		9.5	5		2
Chloroform	(µg/L)		2	2	21		14		17.5	100	i	0
cis-1,2-Dichloroethene	(µg/L)		2	2	34		23		28.5	70		0
Tetrachloroethene	(µg/L)		2	2	170		110		140	5		2
Trichloroethene	(µg/L)		2	2	540		400		470	5		2

Table 4.62. REGIME=EF AREA NAME=Building 9201-2

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		4	4	7.69	6.55	7.1875	250		0
Fluoride	(mg/L)		4	4	0.682	0.317	0.43425	4		0
Nitrate Nitrogen	(mg/L)		4	4	0.492	0.102	0.288	10		0
Sulfate	(mg/L)		4	4	148	78.1	114.025	250		0
Aluminum, ICAP	(mg/L)		4	3	6.17	1.42	3.826667	0.2		3
Antimony, ICAP	(mg/L)		4	4	0.4	0.2	0.25	0.006		4
Arsenic, ICAP	(mg/L)		4	4	0.4	0.2	0.25	0.05	j	4
Barium, ICAP	(mg/L)		4	4	0.197	0.139	0.16175	2		0
Cadmium, ICAP	(mg/L)		4	4	0.02	0.01	0.0125	0.005		4
Calcium, ICAP	(mg/L)		4	4	98.9	54.3	82.2	NR		NA
Chromium, ICAP	(mg/L)		4	4	0.04	0.02	0.025	0.1		0
Copper, ICAP	(mg/L)		4	1	0.0464	0.0464	0.0464	1.3		0
Iron, ICAP	(mg/L)		4	3	7.12	0.9	3.72	0.3		3
Lead, PMS	(mg/L)		4	3	0.00498	0.0011	0.00296	0.015	c	0
Lead, ICAP	(mg/L)		4	4	0.2	0.1	0.125	0.015	c	4
Magnesium, ICAP	(mg/L)		4	4	9.94	8.14	9.01	NR		NA
Manganese, ICAP	(mg/L)		4	4	1.29	0.0695	0.813875	0.05		4
Nickel, PMS	(mg/L)		4	3	0.0105	0.0051	0.008053	NR		NA
Nickel, ICAP	(mg/L)		4	4	0.1	0.05	0.0625	0.1	d	0
Niobium, ICAP	(mg/L)		4	4	0.4	0.2	0.25	NR		NA
Phosphorus, ICAP	(mg/L)		4	4	1.21	0.5	0.8025	NR		NA
Potassium, ICAP	(mg/L)		4	3	5.17	4.57	4.813333	NR		NA
Selenium, ICAP	(mg/L)		4	4	0.4	0.2	0.25	0.05		4
Silicon, ICAP	(mg/L)		4	4	12.6	4.76	8.495	NR		NA

Table 4.62 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Sodium, ICAP	(mg/L)		4	4	21.5		11.2		17.675	NR		NA
Strontium, ICAP	(mg/L)		4	4	0.281		0.23		0.266	NR		NA
Sulfur, ICAP	(mg/L)		4	4	50.3		27.5		39.65	NR		NA
Thallium, ICAP	(mg/L)		4	4	0.4		0.2		0.25	NR		NA
Titanium, ICAP	(mg/L)		4	4	0.162		0.0539		0.10335	NR		NA
Uranium, PMS	(mg/L)		4	4	0.0027		0.00068		0.001533	0.03		0
Uranium, ICAP	(mg/L)		4	4	4		2		2.5	NR		NA
Zirconium, ICAP	(mg/L)		4	4	0.4		0.2		0.25	NR		NA
Static Water Level	(ft - toc)		4	NA	3.4		2.11		2.815	NR		NA
Alkalinity as HCO3	(mg/L)		4	4	187		105		160.25	NR		NA
Conductivity	(µmhos/cm)		4	4	675		451		596.25	NR		NA
Dissolved Solids	(mg/L)		4	4	502		242		395	500		1
pH	(pH)		4	4	7.28		7.13		7.195	6.5/8.5		0
Total Suspended Solids	(mg/L)		4	4	241		5		70.75	NR		NA
Turbidity	(NTU)		4	4	362		12.8		124.5	1		4
Uranium-235	(wt %)		4	4	1.02		0.49		0.7625	NR		NA
Gross Alpha	(pCi/L)		4	1	2.2		2.2		2.2	15	f	0
Gross Beta	(pCi/L)		4	2	11		5.3		8.15	50	a	0
1,2-Dichloroethene (Total)	(µg/L)		4	4	240		61		142.75	NR	b	NA
Chloroform	(µg/L)		4	1	1	J	1	J	1	100	i	0
cis-1,2-Dichloroethene	(µg/L)		4	4	240		61		142.75	70		3
trans-1,2-Dichloroethene	(µg/L)		4	2	2	J	2	J	2	100		0
Trichloroethene	(µg/L)		4	3	3	J	1	J	2	5		0
Vinyl chloride	(µg/L)		4	4	59		2		27.5	2		3

Table 4.63. REGIME=EF AREA NAME=Exit Pathway Monitoring Location E (Approximately 300 ft South of the Waste Coolant Processing Area)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Bicarbonate	(mg/L)		1	1	342		342		342	NR		NA
Chloride	(mg/L)		1	1	8.8		8.8		8.8	250		0
Fluoride	(mg/L)		1	1	0.29		0.29		0.29	4		0
Nitrate/Nitrite	(mg/L)		1	1	0.18		0.18		0.18	NR		NA
Sulfate	(mg/L)		1	1	17.5		17.5		17.5	250		0
Static Water Level	(ft - toc)		1	NA	13.21		13.21		13.21	NR		NA
Dissolved Solids	(mg/L)		1	1	332		332		332	500		0
Gross Alpha	(pCi/L)		1	1	1.85		1.85		1.85	15	f	0
Gross Beta	(pCi/L)		1	1	5.92		5.92		5.92	50	a	0
Acetone	(µg/L)		1	1	4	J	4	J	4	NR		NA
cis-1,2-Dichloroethene	(µg/L)		1	1	12		12		12	70		0
Methane	(µg/L)		1	1	66		66		66	NR		NA
Tetrachloroethene	(µg/L)		1	1	4	J	4	J	4	5		0
Toluene	(µg/L)		1	1	1	J	1	J	1	1000		0
Trichloroethene	(µg/L)		1	1	6		6		6	5		1
Vinyl chloride	(µg/L)		1	1	1	J	1	J	1	2		0

Table 4.64. REGIME=EF AREA NAME=Exit Pathway Monitoring Location I (Approximately 1200 ft West of New Hope Pond)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Bicarbonate	(mg/L)		4	4	289		236		266.5	NR		NA
Chloride	(mg/L)		4	4	36.9		21.5		27.075	250		0
Fluoride	(mg/L)		4	4	0.22		0.13		0.1775	4		0
Nitrate/Nitrite	(mg/L)		4	4	9.3		0.2		4.43	NR		NA
Sulfate	(mg/L)		4	4	59.1		25.6		42.9	250		0
Static Water Level	(ft - toc)		4	NA	13.73		10.77		12.0675	NR		NA
Gross Alpha	(pCi/L)		4	4	80.5		8.55		38.1625	15	f	2
Gross Beta	(pCi/L)		4	3	44.4		8.4		26.96667	50	a	0
2-Butanone	(µg/L)		4	1	11	Q	11	Q	11	NR		NA
2-Hexanone	(µg/L)		4	1	2	J	2	J	2	NR		NA
Acetone	(µg/L)		4	2	47	Q	4	J	25.5	NR		NA
Bromomethane	(µg/L)		4	1	2	J	2	J	2	NR		NA
Carbon tetrachloride	(µg/L)		4	4	71		14		43.75	5		4
Chloroform	(µg/L)		4	4	120		9		62.75	100	i	2
Chloromethane	(µg/L)		4	1	3	J	3	J	3	NR		NA
cis-1,2-Dichloroethene	(µg/L)		4	2	80		53		66.5	70		1
Tetrachloroethene	(µg/L)		4	4	45		6		23	5		4
trans-1,2-Dichloroethene	(µg/L)		4	2	4	J	2	J	3	100		0
Trichloroethene	(µg/L)		4	2	52		37		44.5	5		2

Table 4.65. REGIME=EF AREA NAME=Exit Pathway Monitoring Location J (Approximately 800 ft East of the New Hope Pond)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Bicarbonate	(mg/L)		10	10	251	137	195.5	NR		NA
Chloride	(mg/L)		34	34	102	2.5	22.08882	250		0
Fluoride	(mg/L)		34	24	1.2	0.17	0.618292	4		0
Nitrate Nitrogen	(mg/L)		14	7	0.847	0.0655	0.439071	10		0
Nitrate/Nitrite	(mg/L)		10	7	0.87	0.076	0.432286	NR		NA
Sulfate	(mg/L)		34	34	59.4	0.3	22.02471	250		0
Aluminum, ICAP	(mg/L)		24	3	0.389	0.202	0.268333	0.2		3
Antimony, ICAP	(mg/L)		24	24	0.2	0.2	0.2	0.006		24
Arsenic, ICAP	(mg/L)		24	24	0.2	0.2	0.2	0.05	j	24
Barium, ICAP	(mg/L)		24	24	0.768	0.0312	0.158625	2		0
Boron, ICAP	(mg/L)		24	12	0.714	0.107	0.272	NR		NA
Cadmium, ICAP	(mg/L)		24	24	0.01	0.01	0.01	0.005		24
Calcium, ICAP	(mg/L)		24	24	129	17.4	60.4375	NR		NA
Chromium, ICAP	(mg/L)		24	4	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		24	16	0.397	0.0507	0.14755	0.3		1
Lead, PMS	(mg/L)		24	1	0.00138	0.00138	0.00138	0.015	c	0
Lead, ICAP	(mg/L)		24	24	0.1	0.1	0.1	0.015	c	24
Lithium, ICAP	(mg/L)		24	13	0.125	0.0115	0.045515	NR		NA
Magnesium, ICAP	(mg/L)		24	24	29	9.19	18.79792	NR		NA
Manganese, ICAP	(mg/L)		24	8	0.204	0.00685	0.072856	0.05		6
Nickel, PMS	(mg/L)		24	1	0.00526	0.00526	0.00526	NR		NA
Nickel, ICAP	(mg/L)		24	4	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		24	24	0.2	0.2	0.2	NR		NA
Nitrate/Nitrite as Nitrogen	(mg/L)		10	6	0.961	0.141	0.485833	NR		NA

Table 4.65 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Phosphorus, ICAP	(mg/L)		24	24	0.5		0.5		0.5	NR		NA
Potassium, ICAP	(mg/L)		24	14	5.02		2.09		3.173571	NR		NA
Selenium, ICAP	(mg/L)		24	24	0.2		0.2		0.2	0.05		24
Silicon, ICAP	(mg/L)		24	24	9.29		3.86		5.162917	NR		NA
Sodium, ICAP	(mg/L)		24	24	166		0.762		30.89729	NR		NA
Strontium, ICAP	(mg/L)		24	24	4.07		0.0726		1.04795	NR		NA
Sulfur, ICAP	(mg/L)		24	24	20.8		0.5		7.819583	NR		NA
Thallium, ICAP	(mg/L)		24	24	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		24	24	0.05		0.05		0.05	NR		NA
Uranium, PMS	(mg/L)		24	2	0.000525		0.0005		0.000513	0.03		0
Uranium, ICAP	(mg/L)		24	24	2		2		2	NR		NA
Zinc, ICAP	(mg/L)		24	5	0.12		0.05		0.0818	5		0
Zirconium, ICAP	(mg/L)		24	24	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		26	NA	59.35		10.52		39.87154	NR		NA
Alkalinity as HCO3	(mg/L)		24	24	341		152		241.6667	NR		NA
Conductivity	(µmhos/cm)		24	24	869		255		503.8333	NR		NA
Dissolved Solids	(mg/L)		34	34	555		167		309.2353	500		2
pH	(pH)		24	24	8.1		6.96		7.445	6.5/8.5		0
Total Suspended Solids	(mg/L)		34	5	5		2		3	NR		NA
Turbidity	(NTU)		24	24	13.4		0.113		2.679167	1		18
Gross Alpha	(pCi/L)		36	8	10.9		2.82		5.27875	15	f	0
Gross Beta	(pCi/L)		36	14	36.3		2.44		9.091429	50	a	0
Acetone	(µg/L)		36	10	1300	Q	12	Q	221.6	NR		NA
Acrylonitrile	(µg/L)		24	1	10		10		10	NR		NA
Benzene	(µg/L)		36	2	2	J	1	J	1.5	5		0

Table 4.65 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Carbon tetrachloride	(µg/L)		36	14	110		5		34.21429	5		13
Chloroform	(µg/L)		36	16	15		1	J	5.3125	100	i	0
Ethylbenzene	(µg/L)		36	5	3	J	1	J	2.2	700		0
Styrene	(µg/L)		36	3	3	J	1	J	2	100		0
Tetrachloroethene	(µg/L)		36	13	12		1	J	5	5		4
Toluene	(µg/L)		36	7	7	Q	2	J	3.428571	1000		0
Trichloroethene	(µg/L)		36	9	2	J	1	J	1.555556	5		0
Xylenes	(µg/L)		36	4	6	Q	1	J	2.25	10000		0

Table 4.66. REGIME=EF AREA NAME=Exit Pathway Scarboro Road/Pine Rid

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		6	6	11.9	1.17	4.583333	250		0
Fluoride	(mg/L)		6	6	0.306	0.129	0.212333	4		0
Sulfate	(mg/L)		6	6	125	1.18	71.07333	250		0
Aluminum, ICAP	(mg/L)		6	1	0.292	0.292	0.292	0.2		1
Antimony, ICAP	(mg/L)		6	6	0.2	0.2	0.2	0.006		6
Arsenic, ICAP	(mg/L)		6	6	0.2	0.2	0.2	0.05	j	6
Barium, ICAP	(mg/L)		6	6	0.166	0.0381	0.071067	2		0
Boron, ICAP	(mg/L)		6	4	0.241	0.124	0.18625	NR		NA
Cadmium, ICAP	(mg/L)		6	6	0.01	0.01	0.01	0.005		6
Calcium, ICAP	(mg/L)		6	6	89	57.8	68.48333	NR		NA
Chromium, ICAP	(mg/L)		6	6	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		6	6	22.2	0.197	7.609	0.3		4
Lead, PMS	(mg/L)		6	3	0.00264	0.0007	0.001567	0.015	c	0
Lead, ICAP	(mg/L)		6	6	0.1	0.1	0.1	0.015	c	6
Lithium, ICAP	(mg/L)		6	4	0.0328	0.0308	0.031425	NR		NA
Magnesium, ICAP	(mg/L)		6	6	41.7	16.7	27.7	NR		NA
Manganese, ICAP	(mg/L)		6	6	3.21	0.0135	1.000533	0.05		2
Nickel, ICAP	(mg/L)		6	6	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		6	6	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		6	6	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		6	6	4.89	2.77	3.533333	NR		NA
Selenium, ICAP	(mg/L)		6	6	0.2	0.2	0.2	0.05		6
Silicon, ICAP	(mg/L)		6	6	12.6	3.71	9.386667	NR		NA
Sodium, ICAP	(mg/L)		6	6	16.2	5.04	10.60333	NR		NA

Table 4.66 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Strontium, ICAP	(mg/L)		6	6	1.56	0.0741	0.734	NR		NA
Sulfur, ICAP	(mg/L)		6	6	43	0.5	23.88167	NR		NA
Thallium, ICAP	(mg/L)		6	6	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		6	6	0.05	0.05	0.05	NR		NA
Uranium, ICAP	(mg/L)		6	6	2	2	2	NR		NA
Zinc, ICAP	(mg/L)		6	2	1.44	1.13	1.285	5		0
Zirconium, ICAP	(mg/L)		6	6	0.2	0.2	0.2	NR		NA
Static Water Level	(ft - toc)		6	NA	12.35	0	4.011667	NR		NA
Alkalinity as HCO3	(mg/L)		6	6	284	201	237.5	NR		NA
Conductivity	(µmhos/cm)		6	6	698	502	610.8333	NR		NA
Dissolved Solids	(mg/L)		6	6	435	226	346.6667	500		0
pH	(pH)		6	6	7.45	6.82	7.191667	6.5/8.5		0
Total Suspended Solids	(mg/L)		6	3	38	2	20.33333	NR		NA
Turbidity	(NTU)		6	6	168	1.31	41.21	1		6
Gross Alpha	(pCi/L)		6	1	4	4	4	15	f	0

Table 4.67. REGIME=EF AREA NAME=Exit Pathway Spring/Surface Water

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Dissolved Solids	(mg/L)		52	52	454		124		218.2308	500		0
Total Suspended Solids	(mg/L)		52	25	28.6		5		12.62	NR		NA
Uranium-233/234	(pCi/L)		4	4	8.11		0.83		3.3575	NR		NA
Uranium-235	(pCi/L)		4	2	0.52		0.15		0.335	24		0
Uranium-238	(pCi/L)		4	4	31.1		0.85		11.3075	24		1
Gross Alpha	(pCi/L)		4	4	35.2		2.81		14.3975	15	f	1
Gross Beta	(pCi/L)		4	4	21.9		3.56		11.22	50	a	0
Trichloroethene	(µg/L)		4	1	1	J	1	J	1	5		0

Table 4.68. REGIME=EF AREA NAME=Fire Training Facility

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF
Chloride	(mg/L)		2	2	2.62	1.58	2.1	250		0
Fluoride	(mg/L)		2	2	0.143	0.115	0.129	4		0
Nitrate Nitrogen	(mg/L)		2	2	1.26	1.25	1.255	10		0
Sulfate	(mg/L)		2	2	8.85	5.29	7.07	250		0
Aluminum, ICAP	(mg/L)		2	2	2.45	0.209	1.3295	0.2		2
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05	j	2
Barium, ICAP	(mg/L)		2	2	0.0197	0.0116	0.01565	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	108	1.92	54.96	NR		NA
Chromium, PMS	(mg/L)		2	1	0.0137	0.0137	0.0137	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Lead, PMS	(mg/L)		2	1	0.000795	0.000795	0.000795	0.015	c	0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Lithium, ICAP	(mg/L)		2	2	0.0235	0.0114	0.01745	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	2	21.6	10.2	15.9	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	3.32	1.62	2.47	NR		NA
Sodium, ICAP	(mg/L)		2	2	2.58	2.01	2.295	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.305	0.162	0.2335	NR		NA
Sulfur, ICAP	(mg/L)		2	2	3.83	1.74	2.785	NR		NA

Table 4.68 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF
Thallium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05		0.05		0.05	NR		NA
Uranium, ICAP	(mg/L)		2	2	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		2	NA	33.13		25.56		29.345	NR		NA
Alkalinity as HCO3	(mg/L)		2	1	34.2		34.2		34.2	NR		NA
Conductivity	(µmhos/cm)		2	2	1297		455		876	NR		NA
Dissolved Solids	(mg/L)		2	2	172		80		126	500		0
pH	(pH)		2	2	11.74		10.31		11.025	6.5/8.5		2
Turbidity	(NTU)		2	2	0.378		0.329		0.3535	1		0
Gross Alpha	(pCi/L)		2	1	2	R	2	R	2	15	f	0
Gross Beta	(pCi/L)		2	1	27		27		27	50	a	0
Tetrachloroethene	(µg/L)		2	2	3	J	2	J	2.5	5		0

Table 4.69. REGIME=EF AREA NAME=GW Monitoring Plan Grid Location C3 (Approximately 200 ft Northeast of the Coal Pile Trench)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		2	2	32.7	13.6	23.15	250		0
Nitrate Nitrogen	(mg/L)		2	1	2.39	2.39	2.39	10		0
Sulfate	(mg/L)		2	2	185	30.5	107.75	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05	j	2
Barium, ICAP	(mg/L)		2	2	0.247	0.0415	0.14425	2		0
Boron, ICAP	(mg/L)		2	1	0.148	0.148	0.148	NR		NA
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	118	62.5	90.25	NR		NA
Chromium, PMS	(mg/L)		2	1	0.0168	0.0168	0.0168	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		2	2	0.33	0.112	0.221	0.3		1
Lead, PMS	(mg/L)		2	2	0.00313	0.00125	0.00219	0.015	c	0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Lithium, ICAP	(mg/L)		2	1	0.0148	0.0148	0.0148	NR		NA
Magnesium, ICAP	(mg/L)		2	2	16.1	12.3	14.2	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.0403	0.0258	0.03305	0.05		0
Nickel, PMS	(mg/L)		2	1	0.0352	0.0352	0.0352	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Nitrate/Nitrite as Nitrogen	(mg/L)		2	1	2.58	2.58	2.58	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	2	4.16	3.36	3.76	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2

Table 4.69 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Silicon, ICAP	(mg/L)		2	2	7.71		6.91	7.31	NR		NA
Sodium, ICAP	(mg/L)		2	2	9.83		3.81	6.82	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.693		0.271	0.482	NR		NA
Sulfur, ICAP	(mg/L)		2	2	62.6		9.74	36.17	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2		0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05		0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		2	1	0.000955		0.000955	0.000955	0.03		0
Uranium, ICAP	(mg/L)		2	2	2		2	2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2		0.2	0.2	NR		NA
Static Water Level	(ft - toc)		4	NA	12.66		7.24	9.8575	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	169		149	159	NR		NA
Conductivity	(µmhos/cm)		4	4	804		472	640.25	NR		NA
Dissolved Solids	(mg/L)		2	2	497		264	380.5	500		0
pH	(pH)		4	4	7.63		7.02	7.31	6.5/8.5		0
Turbidity	(NTU)		2	2	4.17		0.448	2.309	1		1
1,2-Dichloroethene (Total)	(µg/L)		2	2	1300	J	840	1070	NR	b	NA
cis-1,2-Dichloroethene	(µg/L)		2	2	1300	J	840	1070	70		2
Tetrachloroethene	(µg/L)		2	2	71000		12000	41500	5		2
Trichloroethene	(µg/L)		2	2	5800		830	3315	5		2

Table 4.70. REGIME=EF AREA NAME=GW Monitoring Plan Grid Location D2 (Approximately 1200 ft North of Building 81-10)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		2	2	11.7	8.38	10.04	250		0
Sulfate	(mg/L)		2	2	13.4	11.5	12.45	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05	j	2
Barium, ICAP	(mg/L)		2	2	0.242	0.225	0.2335	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	68.4	68.3	68.35	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Lithium, ICAP	(mg/L)		2	2	0.0125	0.0123	0.0124	NR		NA
Magnesium, ICAP	(mg/L)		2	2	13.7	13.5	13.6	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.0149	0.013	0.01395	0.05		0
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	13.4	13.1	13.25	NR		NA
Sodium, ICAP	(mg/L)		2	2	6.83	6.67	6.75	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.395	0.374	0.3845	NR		NA
Sulfur, ICAP	(mg/L)		2	2	4.46	3.87	4.165	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA

Table 4.70 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Static Water Level	(ft - toc)		2	NA	25.02		23.36		24.19	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	212		205		208.5	NR		NA
Conductivity	(µmhos/cm)		2	2	502		477		489.5	NR		NA
Dissolved Solids	(mg/L)		2	2	261		84		172.5	500		0
pH	(pH)		2	2	7.44		7.43		7.435	6.5/8.5		0
Turbidity	(NTU)		2	2	0.303		0.243		0.273	1		0
1,2-Dichloroethene (Total)	(µg/L)		2	1	1	J	1	J	1	NR	b	NA
cis-1,2-Dichloroethene	(µg/L)		2	1	1	J	1	J	1	70		0
Naphthalene	(µg/L)		1	1	1		1		1	NR		NA
Tetrachloroethene	(µg/L)		2	2	680		170		425	5		2
Trichloroethene	(µg/L)		2	2	4	J	2	J	3	5		0

Table 4.71. REGIME=EF AREA NAME=GW Monitoring Plan Grid Location E3 (Approximately 1100 ft Northeast of Building 81-10)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		2	2	13.3	12.4	12.85	250		0
Nitrate Nitrogen	(mg/L)		2	1	0.178	0.178	0.178	10		0
Sulfate	(mg/L)		2	2	16.1	14.3	15.2	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05	j	2
Barium, ICAP	(mg/L)		2	2	0.474	0.448	0.461	2		0
Boron, ICAP	(mg/L)		2	2	0.124	0.121	0.1225	NR		NA
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	73.8	72.9	73.35	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Lithium, ICAP	(mg/L)		2	2	0.0188	0.0183	0.01855	NR		NA
Magnesium, ICAP	(mg/L)		2	2	15.8	15.5	15.65	NR		NA
Manganese, ICAP	(mg/L)		2	1	0.0655	0.0655	0.0655	0.05		1
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	2	5.54	5.35	5.445	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	8.75	8.57	8.66	NR		NA
Sodium, ICAP	(mg/L)		2	2	9.19	7.76	8.475	NR		NA
Strontium, ICAP	(mg/L)		2	2	1.19	1.18	1.185	NR		NA
Sulfur, ICAP	(mg/L)		2	2	5.42	4.66	5.04	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA

Table 4.71 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Titanium, ICAP	(mg/L)		2	2	0.05		0.05		0.05	NR		NA
Uranium, PMS	(mg/L)		2	2	0.00061		0.0006		0.000605	0.03		0
Uranium, ICAP	(mg/L)		2	2	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		2	NA	9.89		9.14		9.515	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	231		224		227.5	NR		NA
Conductivity	(µmhos/cm)		2	2	550		526		538	NR		NA
Dissolved Solids	(mg/L)		2	2	289		280		284.5	500		0
pH	(pH)		2	2	7.26		7.24		7.25	6.5/8.5		0
Turbidity	(NTU)		2	2	0.187		0.099		0.143	1		0
Gross Alpha	(pCi/L)		2	2	19		12		15.5	15	f	1
1,1,1-Trichloroethane	(µg/L)		2	2	22		8		15	200		0
1,1-Dichloroethane	(µg/L)		2	2	200		130		165	NR		NA
1,1-Dichloroethene	(µg/L)		2	2	76		53		64.5	7		2
1,2-Dichloroethene (Total)	(µg/L)		2	2	22		14		18	NR	b	NA
Acetone	(µg/L)		2	1	11		11		11	NR		NA
Carbon tetrachloride	(µg/L)		2	1	3	J	3	J	3	5		0
Chloroethane	(µg/L)		2	2	81		2	J	41.5	NR		NA
cis-1,2-Dichloroethene	(µg/L)		2	2	22		12		17	70		0
Tetrachloroethene	(µg/L)		2	2	160		110		135	5		2
trans-1,2-Dichloroethene	(µg/L)		2	1	1	J	1	J	1	100		0
Trichloroethene	(µg/L)		2	2	51		41		46	5		2
Vinyl chloride	(µg/L)		2	1	3		3		3	2		1

Table 4.72. REGIME=EF AREA NAME=GW Monitoring Plan Grid Location G3 (Approximately 1400 ft Northeast of the Uranium Oxide Vault)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		4	4	17.7	2.63	10.1075	250		0
Fluoride	(mg/L)		4	2	0.235	0.227	0.231	4		0
Nitrate Nitrogen	(mg/L)		4	4	1.04	0.258	0.63175	10		0
Sulfate	(mg/L)		4	4	21.5	19.2	20.5	250		0
Antimony, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.006		4
Arsenic, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.05	j	4
Barium, ICAP	(mg/L)		4	4	0.373	0.0549	0.211525	2		0
Cadmium, ICAP	(mg/L)		4	4	0.01	0.01	0.01	0.005		4
Calcium, ICAP	(mg/L)		4	4	82.6	53.3	69.75	NR		NA
Chromium, ICAP	(mg/L)		4	4	0.02	0.02	0.02	0.1		0
Lead, PMS	(mg/L)		4	1	0.00866	0.00866	0.00866	0.015	c	0
Lead, ICAP	(mg/L)		4	4	0.1	0.1	0.1	0.015	c	4
Lithium, ICAP	(mg/L)		4	2	0.0163	0.0153	0.0158	NR		NA
Magnesium, ICAP	(mg/L)		4	4	9.69	4.41	7.13	NR		NA
Manganese, ICAP	(mg/L)		4	2	0.00739	0.00695	0.00717	0.05		0
Nickel, PMS	(mg/L)		4	1	0.0644	0.0644	0.0644	NR		NA
Nickel, ICAP	(mg/L)		4	4	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		4	4	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		4	4	2.77	2.03	2.4275	NR		NA
Selenium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.05		4
Silicon, ICAP	(mg/L)		4	4	7.84	3.04	5.3725	NR		NA
Sodium, ICAP	(mg/L)		4	4	6.97	6.14	6.4475	NR		NA
Strontium, ICAP	(mg/L)		4	4	0.375	0.0746	0.2226	NR		NA

Table 4.72 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Sulfur, ICAP	(mg/L)		4	4	6.87		6.66		6.755	NR		NA
Thallium, ICAP	(mg/L)		4	4	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		4	4	0.05		0.05		0.05	NR		NA
Uranium, PMS	(mg/L)		4	1	0.00232		0.00232		0.00232	0.03		0
Uranium, ICAP	(mg/L)		4	4	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		4	4	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		4	NA	14.89		11.51		13.1725	NR		NA
Alkalinity as HCO3	(mg/L)		4	4	222		150		187.5	NR		NA
Conductivity	(µmhos/cm)		4	4	527		333		437	NR		NA
Dissolved Solids	(mg/L)		4	4	292		181		243.25	500		0
pH	(pH)		4	4	7.26		7.14		7.2025	6.5/8.5		0
Turbidity	(NTU)		4	4	2.17		0.153		0.73025	1		1
Gross Alpha	(pCi/L)		4	1	4.3		4.3		4.3	15	f	0
1,1,1-Trichloroethane	(µg/L)		4	1	1	J	1	J	1	200		0
1,1-Dichloroethene	(µg/L)		4	2	2	J	1	J	1.5	7		0
1,2-Dichloroethene (Total)	(µg/L)		4	2	3	J	2	J	2.5	NR	b	NA
Carbon tetrachloride	(µg/L)		4	4	130		14		62.75	5		4
Chloroform	(µg/L)		4	4	5	J	2	J	3.5	100	i	0
cis-1,2-Dichloroethene	(µg/L)		4	2	3	J	2	J	2.5	70		0
Tetrachloroethene	(µg/L)		4	2	14		11		12.5	5		2
Trichloroethene	(µg/L)		4	2	3	J	3	J	3	5		0

Table 4.73. REGIME=EF AREA NAME=GW Monitoring Plan Grid Location J3 (Approximately 300 ft West of the New Hope Pond)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Bicarbonate	(mg/L)		2	2	283		256		269.5	NR		NA
Chloride	(mg/L)		2	2	35.1		33.3		34.2	250		0
Sulfate	(mg/L)		2	2	15.8		14.7		15.25	250		0
Static Water Level	(ft - toc)		2	NA	13.85		13.54		13.695	NR		NA
Dissolved Solids	(mg/L)		2	2	401		351		376	500		0
Gross Alpha	(pCi/L)		2	1	3.16		3.16		3.16	15	f	0
Gross Beta	(pCi/L)		2	2	7.29		4.33		5.81	50	a	0
1,1,1-Trichloroethane	(µg/L)		2	1	5	J	5	J	5	200		0
1,1-Dichloroethane	(µg/L)		2	2	17		16		16.5	NR		NA
1,1-Dichloroethene	(µg/L)		2	2	63		62		62.5	7		2
Carbon tetrachloride	(µg/L)		2	1	2	J	2	J	2	5		0
Chloroform	(µg/L)		2	1	1	J	1	J	1	100	i	0
cis-1,2-Dichloroethene	(µg/L)		2	2	69		65		67	70		0
Methane	(µg/L)		2	2	25		21		23	NR		NA
Tetrachloroethene	(µg/L)		2	2	3100		2700		2900	5		2
trans-1,2-Dichloroethene	(µg/L)		2	2	4	J	3	J	3.5	100		0
Trichloroethene	(µg/L)		2	2	180		150		165	5		2
Vinyl chloride	(µg/L)		2	2	6		5		5.5	2		2

Table 4.74. REGIME=EF AREA NAME=GW Monitoring Plan Grid Location K1 (At the intersection of Bear Creek Road and Scarboro Road)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		2	2	11.6	10.1	10.85	250		0
Sulfate	(mg/L)		2	2	12.7	11.6	12.15	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05	j	2
Barium, ICAP	(mg/L)		2	2	0.308	0.296	0.302	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	48.4	48	48.2	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Lead, PMS	(mg/L)		2	1	0.00053	0.00053	0.00053	0.015	c	0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Lithium, ICAP	(mg/L)		2	2	0.0298	0.0286	0.0292	NR		NA
Magnesium, ICAP	(mg/L)		2	2	12.4	11.7	12.05	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.0526	0.0243	0.03845	0.05		1
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	2	3.64	3.47	3.555	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	11.8	10.9	11.35	NR		NA
Sodium, ICAP	(mg/L)		2	2	36.3	34.7	35.5	NR		NA
Strontium, ICAP	(mg/L)		2	2	1.4	1.39	1.395	NR		NA
Sulfur, ICAP	(mg/L)		2	2	4.62	4.29	4.455	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA

Table 4.74 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR	NA
Zirconium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR	NA
Static Water Level	(ft - toc)		2	NA	7.08	6.01	6.545	NR	NA
Alkalinity as HCO3	(mg/L)		2	2	229	208	218.5	NR	NA
Conductivity	(µmhos/cm)		2	2	503	487	495	NR	NA
Dissolved Solids	(mg/L)		2	2	277	265	271	500	0
pH	(pH)		2	2	7.86	7.74	7.8	6.5/8.5	0
Turbidity	(NTU)		2	2	0.39	0.184	0.287	1	0

Table 4.75. REGIME=EF AREA NAME=GW Monitoring Plan Grid Location K2 ((Approximately 600 ft East of K1 on Scarboro Road)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		2	2	1.89	1.76	1.825	250		0
Fluoride	(mg/L)		2	2	0.164	0.162	0.163	4		0
Sulfate	(mg/L)		2	2	16.9	14.8	15.85	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05	j	2
Barium, ICAP	(mg/L)		2	2	0.164	0.16	0.162	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	47.9	46.2	47.05	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		2	1	0.289	0.289	0.289	0.3		0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Lithium, ICAP	(mg/L)		2	2	0.0163	0.0159	0.0161	NR		NA
Magnesium, ICAP	(mg/L)		2	2	11.5	10.3	10.9	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.0178	0.0138	0.0158	0.05		0
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	2	2.42	2.37	2.395	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	9.02	8.31	8.665	NR		NA
Sodium, ICAP	(mg/L)		2	2	28.2	27.9	28.05	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.635	0.591	0.613	NR		NA
Sulfur, ICAP	(mg/L)		2	2	5.77	4.9	5.335	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA

Table 4.75 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR	NA
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR	NA
Zirconium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR	NA
Static Water Level	(ft - toc)		2	NA	6.3	5.66	5.98	NR	NA
Alkalinity as HCO3	(mg/L)		2	2	212	205	208.5	NR	NA
Conductivity	(µmhos/cm)		2	2	418	418	418	NR	NA
Dissolved Solids	(mg/L)		2	2	229	228	228.5	500	0
pH	(pH)		2	2	7.6	7.52	7.56	6.5/8.5	0
Turbidity	(NTU)		2	2	2.41	0.271	1.3405	1	1

Table 4.76. REGIME=EF AREA NAME=Grid J Primary (Approximately 300 ft West of the New Hope Pond)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		2	2	90.4	83.9	87.15	250		0
Fluoride	(mg/L)		2	2	0.232	0.23	0.231	4		0
Sulfate	(mg/L)		2	2	0.61	0.53	0.57	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05	j	2
Barium, ICAP	(mg/L)		2	2	0.0594	0.0579	0.05865	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	116	112	114	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		2	2	26	25.4	25.7	0.3		2
Lead, PMS	(mg/L)		2	1	0.00726	0.00726	0.00726	0.015	c	0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Magnesium, ICAP	(mg/L)		2	2	15.4	15.1	15.25	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.713	0.665	0.689	0.05		2
Nickel, PMS	(mg/L)		2	1	0.0188	0.0188	0.0188	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	2.66	2.45	2.555	NR		NA
Sodium, ICAP	(mg/L)		2	2	20.4	20.4	20.4	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.241	0.233	0.237	NR		NA
Sulfur, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA

Table 4.76 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Titanium, ICAP	(mg/L)		2	2	0.05		0.05		0.05	NR		NA
Uranium, ICAP	(mg/L)		2	2	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		2	NA	9.89		9.26		9.575	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	276		264		270	NR		NA
Conductivity	(µmhos/cm)		2	2	844		739		791.5	NR		NA
Dissolved Solids	(mg/L)		2	2	433		419		426	500		0
pH	(pH)		2	2	6.79		6.76		6.775	6.5/8.5		0
Total Suspended Solids	(mg/L)		2	2	42		42		42	NR		NA
Turbidity	(NTU)		2	2	226		86		156	1		2
Gross Alpha	(pCi/L)		2	1	2.2		2.2		2.2	15	f	0
Gross Beta	(pCi/L)		2	1	5.7		5.7		5.7	50	a	0
1,1-Dichloroethene	(µg/L)		2	1	1	J	1	J	1	7		0
1,2-Dichloroethene (Total)	(µg/L)		2	2	31		17		24	NR	b	NA
cis-1,2-Dichloroethene	(µg/L)		2	2	31		17		24	70		0
Tetrachloroethene	(µg/L)		2	2	5		4	J	4.5	5		0
Trichloroethene	(µg/L)		2	2	2	J	1	J	1.5	5		0
Vinyl chloride	(µg/L)		2	1	2	J	2	J	2	2		0

Table 4.77. REGIME=EF AREA NAME=New Hope Pond

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Bicarbonate	(mg/L)		10	10	271	160	204	NR		NA
Chloride	(mg/L)		18	18	83.5	8.4	32.51111	250		0
Fluoride	(mg/L)		18	12	0.29	0.12	0.183583	4		0
Nitrate Nitrogen	(mg/L)		8	4	1.15	0.684	0.87875	10		0
Nitrate/Nitrite	(mg/L)		10	10	2.7	0.12	1.215	NR		NA
Sulfate	(mg/L)		18	17	44.5	1.51	17.20059	250		0
Aluminum, ICAP	(mg/L)		8	1	0.53	0.53	0.53	0.2		1
Antimony, ICAP	(mg/L)		8	8	0.2	0.2	0.2	0.006		8
Arsenic, ICAP	(mg/L)		8	8	0.2	0.2	0.2	0.05	j	8
Barium, ICAP	(mg/L)		8	8	0.601	0.0449	0.275113	2		0
Cadmium, ICAP	(mg/L)		8	8	0.01	0.01	0.01	0.005		8
Calcium, ICAP	(mg/L)		8	8	97.8	47.2	76.7375	NR		NA
Chromium, PMS	(mg/L)		8	2	0.0184	0.0119	0.01515	NR		NA
Chromium, ICAP	(mg/L)		8	8	0.0234	0.02	0.020425	0.1		0
Iron, ICAP	(mg/L)		8	6	10.8	0.0546	3.7826	0.3		5
Lead, ICAP	(mg/L)		8	8	0.1	0.1	0.1	0.015	c	8
Lithium, ICAP	(mg/L)		8	3	0.0145	0.0128	0.013633	NR		NA
Magnesium, ICAP	(mg/L)		8	8	26.5	10.7	19.4375	NR		NA
Manganese, ICAP	(mg/L)		8	7	0.463	0.00605	0.164536	0.05		4
Nickel, PMS	(mg/L)		8	1	0.00549	0.00549	0.00549	NR		NA
Nickel, ICAP	(mg/L)		8	8	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		8	8	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		8	8	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		8	7	2.75	2.01	2.352857	NR		NA

Table 4.77 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Selenium, ICAP	(mg/L)		8	8	0.2		0.2		0.2	0.05		8
Silicon, ICAP	(mg/L)		8	8	14		4.03		7.0025	NR		NA
Sodium, ICAP	(mg/L)		8	8	18.9		5.35		10.57375	NR		NA
Strontium, ICAP	(mg/L)		8	8	0.443		0.148		0.322125	NR		NA
Sulfur, ICAP	(mg/L)		8	8	6.25		0.5		4.07125	NR		NA
Thallium, ICAP	(mg/L)		8	8	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		8	8	0.05		0.05		0.05	NR		NA
Uranium, PMS	(mg/L)		8	2	0.0019		0.000645		0.001273	0.03		0
Uranium, ICAP	(mg/L)		8	8	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		8	8	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		20	NA	20.61		7.02		11.974	NR		NA
Alkalinity as HCO3	(mg/L)		8	8	279		170		229.125	NR		NA
Conductivity	(µmhos/cm)		8	8	770		437		588.75	NR		NA
Dissolved Solids	(mg/L)		20	20	552		207		331.25	500		1
pH	(pH)		8	8	7.7		7.24		7.475	6.5/8.5		0
Total Suspended Solids	(mg/L)		20	9	39.5		2		11.24444	NR		NA
Turbidity	(NTU)		8	8	145		0.963		38.99913	1		7
Uranium-233/234	(pCi/L)		8	8	468		0.31		98.185	NR		NA
Uranium-235	(wt %)		2	2	0.72		0.42		0.57	NR		NA
Uranium-235	(pCi/L)		8	4	30.1		0.37		11.345	24		1
Uranium-236	(pCi/L)		8	3	10.3		0.4		6.616667	NR		NA
Uranium-238	(pCi/L)		8	6	185		2.99		58.79333	24		2
Gross Alpha	(pCi/L)		20	13	775		1.21		109.9054	15	f	4
Gross Beta	(pCi/L)		20	12	201		3.22		39.49583	50	a	2
1,1-Dichloroethene	(µg/L)		20	6	3	J	1	J	2	7		0

Table 4.77 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
1,2-Dichloroethene (Total)	(µg/L)		8	6	180		5		73.83333	NR	b	NA
Benzene	(µg/L)		20	1	3	J	3	J	3	5		0
Carbon disulfide	(µg/L)		20	2	8		2	J	5	NR		NA
Carbon tetrachloride	(µg/L)		20	13	2000		1	J	528.6923	5		12
Chlorobenzene	(µg/L)		20	1	1	J	1	J	1	100		0
Chloroform	(µg/L)		20	13	850		1	J	115.6154	100	i	3
Chloromethane	(µg/L)		20	1	1	J	1	J	1	NR		NA
cis-1,2-Dichloroethene	(µg/L)		20	12	180		5		56.16667	70		2
Methane	(µg/L)		12	7	890		16		270.2857	NR		NA
Methylene chloride	(µg/L)		20	1	52		52		52	5		1
Tetrachloroethene	(µg/L)		20	16	900		2	J	211.5	5		10
Toluene	(µg/L)		20	1	2	J	2	J	2	1000		0
trans-1,2-Dichloroethene	(µg/L)		20	2	2	J	1	J	1.5	100		0
Trichloroethene	(µg/L)		20	11	170		1	J	76	5		8
Vinyl chloride	(µg/L)		20	4	5		1	J	3	2		3

Table 4.78. REGIME=EF AREA NAME=Rust Garage Area

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		2	2	44.6	41.7	43.15	250		0
Fluoride	(mg/L)		2	1	0.23	0.23	0.23	4		0
Nitrate Nitrogen	(mg/L)		2	2	1190	972	1081	10		2
Sulfate	(mg/L)		2	1	2.12	2.12	2.12	250		0
Antimony, ICAP	(mg/L)		2	2	0.4	0.4	0.4	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.4	0.4	0.4	0.05	j	2
Barium, ICAP	(mg/L)		2	2	6.55	5.34	5.945	2		2
Cadmium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.005		2
Calcium, ICAP	(mg/L)		2	2	1430	1310	1370	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.04	0.04	0.04	0.1		0
Lead, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.015	c	2
Lithium, ICAP	(mg/L)		2	2	0.159	0.121	0.14	NR		NA
Magnesium, ICAP	(mg/L)		2	2	145	118	131.5	NR		NA
Manganese, ICAP	(mg/L)		2	2	4.93	3.28	4.105	0.05		2
Nickel, PMS	(mg/L)		2	2	0.239	0.202	0.2205	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.251	0.167	0.209	0.1	d	2
Niobium, ICAP	(mg/L)		2	2	0.4	0.4	0.4	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	1	1	1	NR		NA
Potassium, ICAP	(mg/L)		2	2	8.07	7.51	7.79	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.4	0.4	0.4	0.05		2
Silicon, ICAP	(mg/L)		2	2	26.7	20.8	23.75	NR		NA
Sodium, ICAP	(mg/L)		2	2	86	74.7	80.35	NR		NA
Strontium, ICAP	(mg/L)		2	2	3.53	2.89	3.21	NR		NA
Sulfur, ICAP	(mg/L)		2	2	1	1	1	NR		NA

Table 4.78 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Thallium, ICAP	(mg/L)		2	2	0.4		0.4		0.4	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.1		0.1		0.1	NR		NA
Uranium, PMS	(mg/L)		2	2	0.00132		0.00075		0.001035	0.03		0
Uranium, ICAP	(mg/L)		2	2	4		4		4	NR		NA
m,p-Xylene, X-10 lab	(µg/L)		1	1	26		26		26	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.4		0.4		0.4	NR		NA
Static Water Level	(ft - toc)		2	NA	3.62		2.59		3.105	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	306		281		293.5	NR		NA
Conductivity	(µmhos/cm)		2	2	7770		7180		7475	NR		NA
Dissolved Solids	(mg/L)		2	2	8310		6030		7170	500		2
pH	(pH)		2	2	5.46		5.22		5.34	6.5/8.5		2
Total Suspended Solids	(mg/L)		2	1	3		3		3	NR		NA
Turbidity	(NTU)		2	2	1.08		1.04		1.06	1		2
Uranium-234	(pCi/L)		2	1	0.58		0.58		0.58	20		0
Uranium-235	(wt %)		1	1	0.842		0.842		0.842	NR		NA
Uranium-236	(pCi/L)		1	1	0.048	R	0.048	R	0.048	NR		NA
Uranium-238	(pCi/L)		2	2	0.4		0.23		0.315	24		0
Technetium-99	(pCi/L)		2	2	4700		4000		4350	4000		1
Gross Alpha	(pCi/L)		2	1	30	R	30	R	30	15	f	1
Gross Beta	(pCi/L)		2	2	4200		2400		3300	50	a	2
1,1-Dichloroethene	(µg/L)		2	1	4	J	4	J	4	7		0
1,2-Dichloroethene (Total)	(µg/L)		2	2	12		4	J	8	NR	b	NA
1,2-Dimethylbenzene	(µg/L)		1	1	100		100		100	NR		NA
4-Methyl-2-pentanone	(µg/L)		2	1	3	J	3	J	3	NR		NA
Benzene	(µg/L)		2	2	1700		590		1145	5		2

Table 4.78 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Bromoform	(µg/L)		2	1	3	J	3	J	3	100	i	0
Chloroform	(µg/L)		2	2	17		10		13.5	100	i	0
cis-1,2-Dichloroethene	(µg/L)		2	2	12		4	J	8	70		0
Ethylbenzene	(µg/L)		2	1	2	J	2	J	2	700		0
Methylene chloride	(µg/L)		2	2	26		13		19.5	5		2
Naphthalene	(µg/L)		1	1	20		20		20	NR		NA
Tetrachloroethene	(µg/L)		2	2	290		180		235	5		2
Toluene	(µg/L)		2	1	2	J	2	J	2	1000		0
Trichloroethene	(µg/L)		2	2	8		3	J	5.5	5		1
Xylenes	(µg/L)		2	2	130		38		84	10000		0

Table 4.79. REGIME=EF AREA NAME=S-2 Site

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Bicarbonate	(mg/L)		1	1	79.8		79.8		79.8	NR		NA
Chloride	(mg/L)		3	3	8.7	Q	5.3		7.103333	250		0
Fluoride	(mg/L)		3	3	5.2		0.96		2.533333	4		1
Nitrate Nitrogen	(mg/L)		2	2	58.8		32.9		45.85	10		2
Nitrate/Nitrite	(mg/L)		1	1	648		648		648	NR		NA
Sulfate	(mg/L)		3	3	18.8		6.7	Q	12.96667	250		0
Aluminum, ICAP	(mg/L)		2	1	0.225		0.225		0.225	0.2		1
Antimony, ICAP	(mg/L)		2	2	0.2		0.2		0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2		0.2		0.2	0.05	j	2
Barium, ICAP	(mg/L)		2	2	0.111		0.064		0.0875	2		0
Cadmium, PMS	(mg/L)		2	2	0.114		0.0588		0.0864	0.005		2
Cadmium, ICAP	(mg/L)		2	2	0.112		0.0561		0.08405	0.005		2
Calcium, ICAP	(mg/L)		2	2	110		98.3		104.15	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02		0.02		0.02	0.1		0
Copper, ICAP	(mg/L)		2	2	0.241		0.107		0.174	1.3		0
Iron, ICAP	(mg/L)		2	1	0.147		0.147		0.147	0.3		0
Lead, PMS	(mg/L)		2	1	0.000505		0.000505		0.000505	0.015	c	0
Lead, ICAP	(mg/L)		2	2	0.1		0.1		0.1	0.015	c	2
Magnesium, ICAP	(mg/L)		2	2	14.5		12.5		13.5	NR		NA
Manganese, ICAP	(mg/L)		2	2	3.94		1.7		2.82	0.05		2
Nickel, PMS	(mg/L)		2	2	0.0316		0.011		0.0213	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.05		0.05		0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5		0.5		0.5	NR		NA

Table 4.79 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Potassium, ICAP	(mg/L)		2	2	3.52		2.53		3.025	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	3.27		2.22		2.745	NR		NA
Sodium, ICAP	(mg/L)		2	2	14.4		8.88		11.64	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.228		0.141		0.1845	NR		NA
Sulfur, ICAP	(mg/L)		2	2	6.69		4.62		5.655	NR		NA
Thallium, PMS	(mg/L)		2	2	0.00192		0.00182		0.00187	0.002		0
Thallium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05		0.05		0.05	NR		NA
Uranium, PMS	(mg/L)		2	2	0.00456		0.00378		0.00417	0.03		0
Uranium, ICAP	(mg/L)		2	2	2		2		2	NR		NA
Zinc, ICAP	(mg/L)		2	1	0.053		0.053		0.053	5		0
Zirconium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		3	NA	27.2		7.85		17.78	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	188		167		177.5	NR		NA
Conductivity	(µmhos/cm)		2	2	984		809		896.5	NR		NA
Dissolved Solids	(mg/L)		3	3	4880		95	Q	1797.333	500		1
pH	(pH)		2	2	6.63		6.33		6.48	6.5/8.5		1
Turbidity	(NTU)		2	2	1.61		0.214		0.912	1		1
Uranium-235	(wt %)		2	2	1.36		1.34		1.35	NR		NA
Gross Alpha	(pCi/L)		3	3	38.3		5.2		16.73333	15	f	1
Gross Beta	(pCi/L)		3	1	25.1		25.1		25.1	50	a	0
1,1-Dichloroethene	(µg/L)		3	1	4	J	4	J	4	7		0
1,2-Dichloroethene (Total)	(µg/L)		2	2	11		2	J	6.5	NR	b	NA
Acetone	(µg/L)		3	1	9	J	9	J	9	NR		NA

Table 4.79 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Bromomethane	(µg/L)		3	1	6	J	6	J	6	NR		NA
Carbon disulfide	(µg/L)		3	1	2	J	2	J	2	NR		NA
Carbon tetrachloride	(µg/L)		3	2	23		3	J	13	5		1
Chloroform	(µg/L)		3	3	36		7		18.33333	100	i	0
cis-1,2-Dichloroethene	(µg/L)		3	3	280		2	J	97.66667	70		1
Methane	(µg/L)		1	1	11		11		11	NR		NA
Tetrachloroethene	(µg/L)		3	3	550		110		320	5		3
Toluene	(µg/L)		3	1	1	J	1	J	1	1000		0
trans-1,2-Dichloroethene	(µg/L)		3	1	1	J	1	J	1	100		0
Trichloroethene	(µg/L)		3	3	390		40		183.3333	5		3
Vinyl chloride	(µg/L)		3	1	69		69		69	2		1

Table 4.80. REGIME=EF AREA NAME=S-3 Site

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Bicarbonate	(mg/L)		2	2	732		718		725	NR		NA
Chloride	(mg/L)		2	2	291		161		226	250		1
Nitrate/Nitrite	(mg/L)		2	2	8650		8560		8605	NR		NA
Sulfate	(mg/L)		2	2	9.9		1.5		5.7	250		0
Static Water Level	(ft - toc)		2	NA	7.15		6.87		7.01	NR		NA
Uranium-233/234	(pCi/L)		1	1	12.4		12.4		12.4	NR		NA
Uranium-235	(pCi/L)		1	1	0.64		0.64		0.64	24		0
Uranium-236	(pCi/L)		1	1	0.28		0.28		0.28	NR		NA
Uranium-238	(pCi/L)		1	1	4.66		4.66		4.66	24		0
Technetium-99	(pCi/L)		2	2	32200		29400		30800	4000		2
Gross Alpha	(pCi/L)		2	2	185		129		157	15	f	2
Gross Beta	(pCi/L)		2	2	13700		13300		13500	50	a	2
1,1,2-Trichloroethane	(µg/L)		2	1	1	J	1	J	1	5		0
1,1-Dichloroethene	(µg/L)		2	2	2	J	1	J	1.5	7		0
2-Butanone	(µg/L)		2	1	14		14		14	NR		NA
2-Hexanone	(µg/L)		2	1	3	J	3	J	3	NR		NA
Acetone	(µg/L)		2	1	47		47		47	NR		NA
Benzene	(µg/L)		2	2	1	J	1	J	1	5		0
Bromoform	(µg/L)		2	2	6		3	J	4.5	100	i	0
Bromomethane	(µg/L)		2	2	83		35		59	NR		NA
Carbon disulfide	(µg/L)		2	1	2	J	2	J	2	NR		NA
Chloroethane	(µg/L)		2	1	2	J	2	J	2	NR		NA
Chloroform	(µg/L)		2	2	35		35		35	100	i	0
Chloromethane	(µg/L)		2	2	32		18		25	NR		NA

Table 4.80 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Methylene chloride	(µg/L)		2	2	62	60	61	5	2
Tetrachloroethene	(µg/L)		2	2	4 J	3 J	3.5	5	0
Trichloroethene	(µg/L)		2	2	4 J	4 J	4	5	0

Table 4.81. REGIME=EF AREA NAME=Underground Tank T0134-U

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		4	4	2.4	1.67	2.035	250		0
Fluoride	(mg/L)		4	4	0.569	0.54	0.5545	4		0
Nitrate Nitrogen	(mg/L)		4	2	0.752	0.752	0.752	10		0
Sulfate	(mg/L)		4	4	78	28.1	53.05	250		0
Antimony, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.006		4
Arsenic, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.05	j	4
Barium, ICAP	(mg/L)		4	4	0.128	0.0634	0.0957	2		0
Boron, ICAP	(mg/L)		4	2	0.356	0.356	0.356	NR		NA
Cadmium, ICAP	(mg/L)		4	4	0.01	0.01	0.01	0.005		4
Calcium, ICAP	(mg/L)		4	4	81	38.6	59.8	NR		NA
Chromium, ICAP	(mg/L)		4	4	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		4	2	0.0579	0.0579	0.0579	0.3		0
Lead, ICAP	(mg/L)		4	4	0.1	0.1	0.1	0.015	c	4
Lithium, ICAP	(mg/L)		4	4	0.0998	0.0885	0.09415	NR		NA
Magnesium, ICAP	(mg/L)		4	4	13.6	6.56	10.08	NR		NA
Manganese, ICAP	(mg/L)		4	4	0.282	0.0185	0.15025	0.05		2
Nickel, PMS	(mg/L)		4	2	0.00677	0.00677	0.00677	NR		NA
Nickel, ICAP	(mg/L)		4	4	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		4	4	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		4	2	2.43	2.43	2.43	NR		NA
Selenium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.05		4
Silicon, ICAP	(mg/L)		4	4	4.52	2.79	3.655	NR		NA
Sodium, ICAP	(mg/L)		4	4	5.77	1.75	3.76	NR		NA

Table 4.81 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Strontium, ICAP	(mg/L)		4	4	0.189	0.09	0.1395	NR		NA
Sulfur, ICAP	(mg/L)		4	4	27.1	9.67	18.385	NR		NA
Thallium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		4	4	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		4	4	0.127	0.0381	0.08255	0.03		4
Uranium, ICAP	(mg/L)		4	4	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR		NA
Static Water Level	(ft - toc)		4	NA	11.24	8.93	10.085	NR		NA
Alkalinity as HCO3	(mg/L)		4	4	183	96.8	139.9	NR		NA
Conductivity	(µmhos/cm)		4	4	556	285	420.5	NR		NA
Dissolved Solids	(mg/L)		4	4	502	309	405.5	500		2
pH	(pH)		4	4	7.71	7.38	7.545	6.5/8.5		0
Turbidity	(NTU)		4	4	0.963	0.915	0.939	1		0
Uranium-235	(wt %)		4	4	0.92	0.663	0.7915	NR		NA
Gross Alpha	(pCi/L)		4	4	77	16	46.5	15	f	4
Gross Beta	(pCi/L)		4	4	13	11	12	50	a	0

Table 4.82. REGIME=EF AREA NAME=Union Valley - Exit Pathway

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Bicarbonate	(mg/L)		9	6	274		138		203.6667	NR		NA
Carbonate	(mg/L)		9	6	226		24.4		120.4333	NR		NA
Chloride	(mg/L)		9	9	14.5		1.3		7.055556	250		0
Fluoride	(mg/L)		9	5	2.6		0.12		1.49	4		0
Nitrate/Nitrite	(mg/L)		9	7	1.1		0.036		0.502286	NR		NA
Sulfate	(mg/L)		9	6	5.1		3.8		4.65	250		0
Static Water Level	(ft - toc)		15	NA	35.57		2.75		23.53933	NR		NA
Dissolved Solids	(mg/L)		15	15	625		115		352.4667	500		4
Total Suspended Solids	(mg/L)		15	7	86.4		5.2		25.48571	NR		NA
Gross Alpha	(pCi/L)		9	5	2.77		1.46		2.09	15	f	0
Gross Beta	(pCi/L)		9	7	16.9		2.93		8.51	50	a	0
2-Butanone	(µg/L)		15	1	7	J	7	J	7	NR		NA
2-Hexanone	(µg/L)		15	1	1	J	1	J	1	NR		NA
Acetone	(µg/L)		15	3	11		2	J	5.333333	NR		NA
Benzene	(µg/L)		15	3	2	J	2	J	2	5		0
Carbon disulfide	(µg/L)		15	1	1	J	1	J	1	NR		NA
Carbon tetrachloride	(µg/L)		15	3	5	J	4	J	4.333333	5		0
Chlorobenzene	(µg/L)		15	2	1	J	1	J	1	100		0
Chloroform	(µg/L)		15	2	3	J	2	J	2.5	100	i	0
cis-1,2-Dichloroethene	(µg/L)		15	2	3	J	3	J	3	70		0
Tetrachloroethene	(µg/L)		15	6	2	J	1	J	1.833333	5		0
Toluene	(µg/L)		15	1	1	J	1	J	1	1000		0
Trichloroethene	(µg/L)		15	4	3	J	2	J	2.25	5		0

Table 4.83. REGIME=EF AREA NAME=Uranium Oxide Vault

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		2	2	5.93	4.73	5.33	250		0
Nitrate Nitrogen	(mg/L)		2	1	0.0339	0.0339	0.0339	10		0
Sulfate	(mg/L)		2	2	22.7	21.7	22.2	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05	j	2
Barium, ICAP	(mg/L)		2	2	0.0574	0.0529	0.05515	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	114	94.3	104.15	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		2	2	0.114	0.0707	0.09235	0.3		0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Magnesium, ICAP	(mg/L)		2	2	9.44	9.27	9.355	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.343	0.288	0.3155	0.05		2
Nickel, PMS	(mg/L)		2	2	0.0813	0.0558	0.06855	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.079	0.0582	0.0686	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	2	2.74	2.17	2.455	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	3.51	2.5	3.005	NR		NA
Sodium, ICAP	(mg/L)		2	2	13.8	13.3	13.55	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.153	0.142	0.1475	NR		NA
Sulfur, ICAP	(mg/L)		2	2	8.15	7.2	7.675	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA

Table 4.83 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		2	2	0.338	0.337	0.3375	0.03		2
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Static Water Level	(ft - toc)		2	NA	13.71	11.15	12.43	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	323	284	303.5	NR		NA
Conductivity	(µmhos/cm)		2	2	673	609	641	NR		NA
Dissolved Solids	(mg/L)		2	2	378	327	352.5	500		0
pH	(pH)		2	2	6.89	6.8	6.845	6.5/8.5		0
Total Suspended Solids	(mg/L)		2	1	3	3	3	NR		NA
Turbidity	(NTU)		2	2	4.8	1.12	2.96	1		2
Uranium-235	(wt %)		2	2	0.197	0.194	0.1955	NR		NA
Gross Alpha	(pCi/L)		2	2	106	59	82.5	15	f	2
Gross Beta	(pCi/L)		2	2	56	36	46	50	a	1

Table 4.84. REGIME=EF AREA NAME=Y-12 Fuel Station

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Static Water Level	(ft - toc)		3	NA	11.4		5.16		7.353333	NR	NA
1,2-Dichloroethane	(µg/L)		3	1	680		680		680	5	1
1,2-Dichloropropane	(µg/L)		3	1	14	J	14	J	14	5	1
2-Hexanone	(µg/L)		3	1	140		140		140	NR	NA
4-Methyl-2-pentanone	(µg/L)		3	1	150		150		150	NR	NA
Acetone	(µg/L)		3	1	48	J	48	J	48	NR	NA
Benzene	(µg/L)		3	1	8700		8700		8700	5	1
Ethylbenzene	(µg/L)		3	1	1300		1300		1300	700	1
Toluene	(µg/L)		3	1	4000		4000		4000	1000	1
Xylenes	(µg/L)		3	1	10000		10000		10000	10000	0

Table 4.85. REGIME=PR AREA NAME=Exit Pathway Spring/Surface Water

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Chloride	(mg/L)		10	10	1.48	0.65	0.939	250		0
Nitrate Nitrogen	(mg/L)		10	4	0.0949	0.0361	0.0559	10		0
Sulfate	(mg/L)		10	10	32.4	6.9	14.564	250		0
Aluminum, ICAP	(mg/L)		10	7	3.49	0.225	1.357429	0.2		7
Antimony, ICAP	(mg/L)		10	10	0.2	0.2	0.2	0.006		10
Arsenic, ICAP	(mg/L)		10	10	0.2	0.2	0.2	0.05	j	10
Barium, ICAP	(mg/L)		10	10	0.0875	0.0531	0.07139	2		0
Cadmium, ICAP	(mg/L)		10	10	0.01	0.01	0.01	0.005		10
Calcium, ICAP	(mg/L)		10	10	49.3	12.1	25.18	NR		NA
Chromium, ICAP	(mg/L)		10	10	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		10	10	4.13	0.061	1.046	0.3		5
Lead, PMS	(mg/L)		10	4	0.00316	0.00086	0.001833	0.015	c	0
Lead, ICAP	(mg/L)		10	10	0.1	0.1	0.1	0.015	c	10
Magnesium, ICAP	(mg/L)		10	10	12.1	5.89	8.5	NR		NA
Manganese, ICAP	(mg/L)		10	10	1.01	0.0151	0.17481	0.05		6
Nickel, ICAP	(mg/L)		10	10	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		10	10	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		10	10	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		10	10	6.45	2.04	3.397	NR		NA
Selenium, ICAP	(mg/L)		10	10	0.2	0.2	0.2	0.05		10
Silicon, ICAP	(mg/L)		10	10	11.6	6.67	9.355	NR		NA
Sodium, ICAP	(mg/L)		10	10	5.39	1.57	3.344	NR		NA
Strontium, ICAP	(mg/L)		10	10	0.127	0.0506	0.08401	NR		NA
Sulfur, ICAP	(mg/L)		10	10	10.5	2.72	5.017	NR		NA

Table 4.85 (continued)

COMPOUND	UNITS	FILTERED STATUS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Thallium, ICAP	(mg/L)		10	10	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		10	10	0.117		0.05		0.0623	NR		NA
Uranium, PMS	(mg/L)		10	1	0.000555		0.000555		0.000555	0.03		0
Uranium, ICAP	(mg/L)		10	10	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		10	10	0.2		0.2		0.2	NR		NA
Alkalinity as HCO3	(mg/L)		10	10	153		60.9		94.34	NR		NA
Conductivity	(µmhos/cm)		10	10	565		131		220.4	NR		NA
Dissolved Solids	(mg/L)		10	10	563		74		204.8	500		1
pH	(pH)		10	10	7.83		7.01		7.452	6.5/8.5		0
Total Suspended Solids	(mg/L)		10	8	110		4		26.25	NR		NA
Turbidity	(NTU)		10	10	34.8		1.02		5.745	1		10
Gross Alpha	(pCi/L)		10	5	9.2		2.5	R	3.96	15	f	0
Gross Beta	(pCi/L)		10	4	11		9.6		10.4	50	a	0

Definitions

BC	Bear Creek
CO_3	carbonate
CR	Chestnut Ridge
EF	East Fork
ft – toc	depth to groundwater in feet from top of casing
HCO_3	bicarbonate
ICAP	inductively coupled argon plasma spectroscopy
mg/L	milligrams per liter
NA	not applicable
NR	no reference
NTU	nephelometric turbidity units
pCi/L	picocuries per liter
PMS	plasma mass spectroscopy
PR	Pine Ridge
REF	reference (Safe Drinking Water Act maximum contaminant level)
µg/L	microgram per liter
µmhos/cm	micromhos per centimeter
wt %	weight percent

Footnote Definitions

[a] Regulatory guide for assessing compliance without further analysis.
[b] See *cis*-Dichloroethene and *trans*-Dichloroethene.
[c] Action level, which is applicable to community water systems and non-transient, non-community water systems.
[d] EPA has deleted the MCL for nickel from the *Code of Federal Regulations*. The state of Tennessee retains a nickel MCL of 0.1 mg/L in its currently effective drinking water regulations.
[f] Excludes radon and naturally occurring uranium.
[g] Applies to combined ^{226}Ra and ^{228}Ra.
[h] Minimum of uranium isotopes
[i] Limit for total trihalomethanes (bromodichloromethane + bromoform + chloroform + dibromochloromethane).
[j] On January 22, 2001 EPA adopted a new standard for arsenic in drinking water at 0.01 mg/L, replacing the old standard of 0.05 mg/L. The rule became effective on February 22, 2002. The date by which systems must comply with the new 0.01 mg/L standard is January 23, 2006.

Qualifier Definitions

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