DOE/ORO/2329

ENVIRONMENTAL MONITORING ON THE OAK RIDGE RESERVATION: 2009 RESULTS

Compiled by
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East Tennessee Technology Park

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Table 1.1. 2009 NPDES Permit Number TN 0002950
ETTP Storm Drain Discharge Points

Parameter	Number of samples	Concentration[a] Max	Min	Avg	Reference Value[b]	No. of values exceeding reference
		Discharge Point SD 05A				
Flow, GPD	12/12	14000	1200	5500		
Total Suspended Solids	4/4	14.9	1.7	5.3		
pH, Standard Units	12/12	7.4	6.4	6.8	4.0 - 9.0	0
Oil & Grease	4/4	4.2	1.5	<2.8		
		Discharge Point SD 100				
Flow, GPD	52/52	2608000	394000	933900		
Total Suspended Solids	4/4	5.2	0.9	<2.1		
pH, Standard Units	52/52	7.6	6.5	7.1	6.0 - 9.0	0
Oil & Grease	4/4	4.2	2.3	3.4		
		Discharge Point SD 124				
Flow, GPD	4/4	317400	173600	258300		
pH, Standard Units	4/4	7.8	7.2	7.5	6.0 - 9.0	0
		Discharge Point SD 142				
Flow, GPD	4/4	89100	52600	74300		
pH, Standard Units	4 /4	8.0	7.3	7.6	4.0 - 9.0	0
		Discharge Point SD 150				
Flow, GPD	4/4	329700	196700	275700		
pH, Standard Units	4/4	7.4	6.9	7.1	4.0 - 9.0	0
		Discharge Point SD 154				
Flow, GPD	12/12	143200	28300	87300		
pH, Standard Units	12/12	7.3	6.6	7.0	4.0 - 9.0	0
Oil & Grease	4 /4	5.9	2.3	3.3		
Total Suspended Solids	4 /4	6.8	2	3.7		
		Discharge Point SD 158				
Flow, GPD	11/12	39500	0	23400		
pH, Standard Units	11/12	7.5	6.5	6.8	4.0 - 9.0	0
Oil & Grease	4/4	4.9	2.5	3.6		
Total Suspended Solids	4 /4	3.8	0.8	1.8		
		Discharge Point SD 170				
Flow, GPD	12/12	833400	238500	451900		
Total Suspended Solids	4/4	<1.0	0.6	<0.7		
pH, Standard Units	12/12	7.6	6.9	7.3	6.0 - 9.0	0
Oil & Grease	4/4	5.4	1.6	2.8		
		Discharge Point SD 180				
Flow, GPD	12/12	784700	243200	440100		
Total Suspended	4/4	12.4	2.4	5.7		
pH, Standard Units	12/12	7.7	6.8	7.4	6.0 - 9.0	0
Oil & Grease	4/4	4.7	1.6	2.6		

Table 1.1 (continued)

Parameter	Number of samples	Concentration[a] Max	Min	Avg	Reference Value[b]	No. of values Exceeding Reference
		Discharge Point SD 190				
Flow, GPD	12/12	1154800	452800	720000		
Total Suspended Solids	4/4	8.4	3.3	5.2		
pH, Standard Units	12/12	7.3	6.8	7.0	6.0 - 9.0	0
Oil & Grease	4/4	4.0	1.5	2.3		
		Discharge Point SD 195				
Flow, GPD	12/12	37100	3400	14900		
pH, Standard Units	12/12	7.5	6.7	7.1	4.0 - 9.0	0
Oil & Grease	4/4	4.0	2.9	3.5		
Total Suspended Solids	4/4	17.1	6.2	10.6		
		Discharge Point SD 198				
Flow, GPD	2/2	241000	193800	217400		
pH, Standard Units	2/2	8.0	7.7	7.9	4.0 - 9.0	0
		Discharge Point SD 210				
Flow, GPD	12/12	659900	255200	410500		
pH, Standard Units	12/12	7.8	6.7	7.3	4.0 - 9.0	0
Total Suspended Solids	4/4	3.2	1.3	2.4		
Oil & Grease	4/4	3.5	2.0	2.6		
		Discharge Point SD 230				
Flow, GPD	12/12	726200	272200	444300		
pH, Standard Units	12/12	7.8	6.8	7.3	4.0 - 9.0	0
Oil & Grease	4/4	4.3	1.5	2.5		
Total Suspended Solids	4/4	7.3	0.6	3.3		
		Discharge Point SD 250				
Flow, GPD	2/4	93100	76300	42400		
pH, Standard Units	2/4	6.9	6.8	6.9		
		Discharge Point SD 280				
Flow, GPD	12/12	31600	5500	14700		
pH, Standard Units	12/12	7.9	7.0	7.3	4.0 – 9.0	0
Oil & Grease	4/4	3.4	1.8	2.4		
Total Suspended Solids	4/4	171	13.2	85.1		
		Discharge Point SD 294				
Flow, GPD	9/12	48400	0	15900		
pH, Standard Units	9/12	7.4	6.8	7.1	4.0 - 9.0	0
Total Suspended Solids	4/4	12.7	0.7	4.6		
Oil & Grease	4/4	4.0	2.3	3.2		
		Discharge Point SD 334				
Flow, GPD	2/2	18700	11600	15200		
pH, Standard Units	2/2	7.6	7.1	7.4	4.0 – 9.0	0

Table 1.1 (continued)

Parameter	Number of samples	Concentration[a] Max	Min	Avg	Reference Value[b]	No. of values Exceeding Reference
		Discharge Point SD 340				
Flow, GPD	12/12	331400	129300	207000		
pH, Standard Units	12/12	9.1	6.7	7.3	4.0 - 9.0	1
Oil & Grease	4/4	6.6	2.1	4.8		
Total Suspended Solids	4/4	78	8.8	46.5		
		Discharge Point SD 350				
Flow, GPD	12/12	25100	5500	12300		
pH, Standard Units	12/12	7.7	6.5	7.0	4.0 - 9.0	0
Oil & Grease	4/4	4.8	1.5	2.8		
Total Suspended Solids	4/4	20.2	4	12.9		
		Discharge Point SD 360				
Flow, GPD	4/12	16100	0	4100		
pH, Standard Units	4/12	7.3	6.7	7.0	4.0-9.0	0
Oil & Grease	3/4	4.5	2.1	3.0		
Total Suspended Solids	3/4	10.7	5.0	7.8		
		Discharge Point SD 380				
Flow, GPD	4/4	683000	417500	575700		
pH, Standard Units	4/4	8.0	7.2	7.7	4.0 - 9.0	0
		Discharge Point SD 382				
Flow, GPD	12/12	73400	27400	44900		
pH, Standard Units	12/12	7.5	6.9	7.2	4.0 - 9.0	0
Oil & Grease	4/4	4.4	2.5	3.3		
Total Suspended Solids	4/4	3.1	0.6	1.5		
		Discharge Point SD 390				
Flow, GPD	9/12	207200	0	90800		
pH, Standard Units	9/12	7.3	6.2	6.8	4.0 - 9.0	0
Total Suspended Solids	4/4	15.2	<0.5	<6.9		
Oil & Grease	4/4	4.5	2.6	3.1		
		Discharge Point SD 410				
Flow, GPD	2/2	35300	26500	30900		
pH, Standard Units	2/2	7.7	7.3	7.5	4.0 - 9.0	0
		Discharge Point SD 430				
Flow, GPD	12/12	581600	210600	350500		
pH, Standard Units	12/12	7.5	6.9	7.1	4.0 - 9.0	0
Oil & Grease	4/4	4.5	<1.49	<2.7		
Total Suspended Solids	4/4	6.5	<0.57	<3.0		
		Discharge Point SD 490				
Flow, GPD	12/12	2397400	849600	1418700		
pH, Standard Units	12/12	7.3	6.8	7.0	4.0 - 9.0	0
Total Suspended Solids	4/4	46	<0.6	<13.8		
Oil & Grease	4/4	5.6	1.9	3.0		
		Discharge Point SD 510				
Flow, GPD	4/4	466800	275100	388800		
pH, Standard Units	4/4	7.4	6.6	6.8	4.0 - 9.0	0

Table 1.1 (continued)

Parameter	Number of samples	Concentration[a] Max	Min	Avg	Reference Value[b]	No. of values Exceeding Reference
		Discharge Point SD 532				
Flow, GPD	2/2	19300	13800	16600		
pH, Standard Units	2/2	7.7	6.8	7.3	4.0 - 9.0	0
		Discharge Point SD 570				
Flow, GPD	2/4	55600	45500	33700		
pH, Standard Units	2/4	7.0	6.9	7.0	4.0 - 9.0	0
		Discharge Point SD 660				
Flow, GPD	2/2	6600	2600	4600		
pH, Standard Units	2/2	7.4	6.9	7.2	4.0 - 9.0	0
		Discharge Point SD 690				
Flow, GPD	4/4	1146300	684100	958700		
pH, Standard Units	4/4	7.0	6.5	6.8	4.0 - 9.0	0
		Discharge Point SD 710				
Flow, GPD	12/12	1290500	469200	778800		
Total Suspended Solids	4/4	1.6	<0.6	<1.0		
pH, Standard Units	12/12	7.7	6.8	7.1	4.0 - 9.0	0
Oil & Grease	4/4	6.0	1.6	3.2		
		Discharge Point SD 724				
Flow, GPD	5/12	387900	0	83100		
pH, Standard Units	5/12	7.3	6.7	7.0	4.0 – 9.0	0
Total Suspended Solids	2/4	74	0.7	37.4		
Oil & Grease	2/4	2.3	1.6	2.0		
		Discharge Point SD 890				
Flow, GPD	1/4	135900	135900	135900		
pH, Standard Units	1/4	7.1	7.1	7.1	4.0 - 9.0	0
		Discharge Point SD 900				
Flow, GPD	2/2	59400	39500	49500		
pH, Standard Units	2/2	7.1	6.8	7.0	4.0 - 9.0	0
		Discharge Point SD 992				
Flow, GPD	6/12	358000	0	81900		
Total Suspended Solids	3/4	24.5	4.8	12.5		
pH, Standard Units	6/12	6.7	6.3	6.5	4.0 - 9.0	0
Oil & Grease	3/4	6.9	3.4	4.7		
		Discharge Point SD 996				
Flow, GPD	2/2	119700	81800	100800		
pH, Standard Units	2/2	6.9	6.9	6.9	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: K-716

Radionuclide	No. of samples	Activity (pCi/L)				DCG	Percent of DCG	Sum of the fractions of the DCGs
		Max	Min	Median[a]	Average[a]			
U-234	2	0.76	0.33	0.55	0.55	6.0e+02	1.1e-01	1.1e-03
U-238	2	0.77	0.70	0.74	0.74	6.0e+02	1.2e-01	1.2e-03
Beta activity (pCi/L)	2	4.1	1.7	2.9	2.9	*b*	*b*	*b*
All listed isotopes								2.3e-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 1.3. Radionuclide concentrations at ETTP discharges and surface water monitoring locations: K-901-A (settling basin for surface water runoff)

Radionuclide	No. of samples	Activity (pCi/L)				DCG	Percent of DCG	Sum of the fractions of the DCGs
		Max	Min	Median[a]	Average[a]			
Tc-99	2	19	9.9	14	14	1.0e+05	1.4e-02	1.2e-04
U-234	2	1.3	0.90	1.1	1.1	5.0e+02	2.2e-01	2.2e-03
U-235	2	0.30	0.27	0.27	0.29	6.0e+02	4.8e-02	4.8e-04
U-238	2	1.7	0.96	1.3	1.3	6.0e+02	2.2e-01	2.2e-03
Beta activity	2	9.8	8.7	9.2	9.2	*b*	*b*	*b*
All listed isotopes								5.0e-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 1.4. Radionuclide concentrations at ETTP discharges and surface water monitoring locations: K-1007-B (settling basin for surface water runoff)

Radionuclide	No. of samples	Activity (pCi/L)				DCG	Percent of DCG	Sum of the fractions of the DCGs
		Max	Min	Median[a]	Average[a]			
Tc-99	2	12	7.0	9.5	9.5	1.0e+05	9.5e-03	9.5e-05
U-234	2	1.0	0.69	0.85	0.85	5.0e+02	1.7e-01	1.7e-03
U-238	2	0.5	0.1	0.3	0.3	6.0e+02	5.0e-02	5.0e-04
Beta activity	2	8.1	6.1	7.1	7.1	*b*	*b*	*b*
All listed isotopes								2.3e-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: K-1407-J (treated effluents from Central Neutralization Facility and K-1435 Waste Water Treatment System)

Radionuclide	No. of samples	Activity (pCi/L)				DCG	Percent of DCG	Sum of the Fractions of the DCGs
		Max	Min	Median[a]	Average[a]			
Am-241	12	0.46	0.05	0.16	0.17	3.0e+01	5.6e-01	5.6e-03
Co-60	12	3.70	-2.2	0.14	0.30	5.0e+03	6.0e-03	6.0e-05
Cs-137	12	130	1.1	16	30	3.0e+03	9.9e-01	9.9e-03
H-3	12	5500	-170	1500	2000	2.0e+06	1.0e-01	1.0e-03
Np-237	12	4.3	-0.01	0.32	0.61	3.0e+01	2.0e-00	2.0e-02
Pu-238	12	1.2	-0.04	0.15	0.24	4.0e+01	6.0e-01	6.1e-03
Pu-239	12	0.45	-0.01	0.055	0.16	3.0e+01	5.4e-01	5.4e-03
Tc-99	12	3600	350	2400	2100	1.0e+05	2.1e-00	2.1e-02
Th-230	12	1.1	0.09	0.23	0.34	3.0e+02	1.1e-01	1.1e-03
Th-234	3	210	120	150	160	1.0e+04	1.6e+00	1.6e-02
U-234	12	309	62	66	94	5.0e+02	1.9e+01	1.9e-01
U-235	12	34	1.2	4.5	9.1	6.0e+02	1.5e+00	1.5e-02
U-236	12	22	0.64	2.1	5.6	5.0e+02	1.1e+00	1.1e-02
U-238	12	1700	37	140	300	6.0e+02	5.0e+01	5.0e-01
Alpha activity	12	2800	67	160	430	*b*	*b*	*b*
Beta activity	12	1200	210	520	650	*b*	*b*	*b*
All listed Isotopes								8.0e-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 1.6. Radionuclide concentrations at ETTP discharges and surface water monitoring locations: K-1700 (Mitchell Branch)

Radionuclide	No. of samples	Activity (pCi/L)				DCG	Percent of DCG	Sum of the Fractions of the DCGs
		Max	Min	Median[a]	Average[a]			
Tc-99	4	34	25	26	28	1.0e+05	2.8e-02	2.8e-04
U-234	4	9.6	7.9	9.2	9.0	5.0e+02	1.8e+00	1.8e-02
U-235	4	0.8	0.52	0.63	0.64	6.0e+02	1.1e-01	1.1e-03
U-238	4	4.6	3.6	4.2	4.2	6.0e+02	6.9e-01	6.9e-03
Alpha activity	4	14	8.2	13	12	*b*	*b*	*b*
Beta activity	4	24	14	18	18	*b*	*b*	*b*
All listed Isotopes								2.6e-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 1.7. Radionuclide concentrations at ETTP discharges and surface water monitoring locations: K-1710

Radionuclide	No. of samples	Activity (pCi/L)				DCG	Percent of DCG	Sum of the Fractions of the DCGs
		Max	Min	Median[a]	Average[a]			
U-234	2	0.54	0.54	0.54	0.54	5.0e+02	1.1e-01	1.1e-03
U-238	2	0.93	0.57	0.75	0.75	6.0e+02	1.3e-01	1.3e-03
All listed Isotopes								2.3e-03

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

Table 1.8. Radionuclide concentrations at ETTP discharges and surface water monitoring locations: MIK 1.4

Radionuclide	No. of samples	Activity (pCi/L)				DCG	Percent of DCG	Sum of the Fractions of the DCGs
		Max	Min	Median[a]	Average[a]			
U-234	4	0.47	-0.064	0.29	0.21	5.0e+02	4.3e-02	4.3e-04
All listed Isotopes								4.3e-04

[a]The 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: CRK16

Radionuclide	No. of samples	Activity (pCi/L)				DCG	Percent of DCG	Sum of the Fractions of the DCGs
		Max	Min	Median	Average			

ALL RADIOLOGICAL MONITORING RESULTS AT CRK 16 IN 2009 WERE BELOW DETECTION

Table 1.10. Radionuclide concentrations at ETTP discharges and surface water monitoring locations: CRK 23

Radionuclide	No. of samples	Activity (pCi/L)				DCG	Percent of DCG	Sum of the Fractions of the DCGs
		Max	Min	Median[a]	Average[a]			
Sb-124	1	8.9	8.9	8.9	8.9	2.0e+04	4.4e-02	4.4e-04
U-234	2	0.54	0.29	0.42	0.42	5.0e+02	8.37e-02	8.37e-04
U-235	2	0.32	0.19	0.26	0.26	6.0e+02	4.31e-02	4.31e-04
U-238	2	0.39	0.26	0.33	0.33	6.0e+02	5.44e-02	5.44e-04
All listed Isotopes								2.26e-03

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

Table 1.11. Radionuclide concentrations at ETTP discharges and surface water monitoring locations: MIK 0.45

Radionuclide	No. of samples	Activity (pCi/L)				DCG	Percent of DCG	Sum of the Fractions of the DCGs
		Max	Min	Median[a]	Average[a]			
Tc-99	4	35	27	30	31	1.0e+05	3.1e-02	3.1e-04
U-234	4	11	5.7	8.9	8.5	5.0e+02	1.7e+00	1.7e-02
U-235	4	1.1	0.34	0.36	0.53	6.0e+02	8.9e-02	8.9e-04
U-238	4	4.2	1.9	2.8	2.9	6.0e+02	4.9e-01	4.9e-03
Alpha activity	4	13	3.6	11	9.7	*b*	*b*	*B*
Beta activity	4	16	12	14	14	*b*	*b*	*b*
All listed Isotopes								

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

Table 1.12. Radionuclide concentrations at ETTP discharges and surface water monitoring locations: MIK 0.59

Radionuclide	No. of samples	Activity (pCi/L)				DCG	Percent of DCG	Sum of the Fractions of the DCGs
		Max	Min	Median[a]	Average[a]			
Tc-99	4	43	24	29	31		3.1e-02	3.1e-04
U-234	4	7.2	4.3	6.2	6	5.0e+02	1.2e+00	1.2e-02
U-235	4	0.82	0.3	0.48	0.52	6.0e+02	8.7e-02	8.9e-04
U-238	4	3.0	1.9	2.3	2.4	6.0e+02	4.0e-01	4.0e-03
Alpha activity	4	9.4	4.8	7.9	7	*b*	*b*	*b*
Beta activity	4	24	17	18	20	*b*	*b*	*b*
All listed Isotopes								1.7e-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 1.13. Radionuclide concentrations at ETTP discharges and surface water monitoring locations: MIK 0.71

Radionuclide	No. of samples	Activity (pCi/L)				DCG	Percent of DCG	Sum of the Fractions of the DCGs
		Max	Min	Median[a]	Average[a]			
Tc-99	4	47	22	27	31	1.0e+05	3.1e-02	3.1e-04
U-234	4	7.2	3.2	5.1	5.1	5.0e+02	1.0e+00	1.0e-02
U-235	4	0.6	0.19	0.43	0.41	6.0e+02	6.8e-02	6.8e-04
U-238	4	2.9	0.76	1.6	1.7	6.0e+02	2.9e-01	2.9e-03
Alpha activity	4	8.3	4.8	6.2	6.4	*b*	*b*	*b*
Beta activity	4	33	12	17	20	*b*	*b*	*b*
All listed Isotopes								1.4e-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 1.14. 2009 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		
1,2 Dichloroethane (µg/L)	1/1	0.6	0.6	0.6	5[b]	0
Aluminum (µg/L)	2/2	170	150	160		0
Arsenic (µg/L)	1/2	1.0	0.9	1	10	0
Barium (µg/L)	2/2	34	33	34	2000[b]	0
Boron (µg/L)	2/2	14	13	14		0
Cadmium (µg/L)	1/2	0.13	0.10	0.12	2.0	0
Calcium (µg/L)	2/2	38000	37000	37500		0
Chromium (µg/L)	2/2	0.52	0.37	0.45	100[b]	0
Cobalt (µg/L)	1/2	0.27	0.17	0.22		0
Copper (µg/L)	2/2	0.84	0.61	0.73	13	0
Dissolved oxygen (mg/L)	2/2	11	8.8	9.8	5.0 min	0
Iron (µg/L)	2/2	240	170	210		0
Lead (µg/L)	2/2	0.55	0.53	0.54	65	0
Lithium (µg/L)	2/2	4.1	2.8	3.5		0
Magnesium (µg/L)	2/2	11000	10000	10500		0
Manganese (µg/L)	2/2	47	40	44		0
Mercury (ng/L)	1/1	1.7	1.7	1.7	51	0
Nickel (µg/L)	2/2	0.74	0.72	0.73	470	0
pH (standard units)	2/2	7.7	7.1	7.4	6.5-8.5	0
Potassium (µg/L)	2/2	2000	2000	2000		0
Sodium (µg/L)	2/2	7800	6900	7400		0
Temperature (C°)	2/2	18	9.8	14.05		0
Vanadium (µg/L)	2/2	0.68	0.64	0.66		0
Zinc (µg/L)	2/2	1.6	1.5	1.6	120	0

[a] All reference values are Tennessee Water Quality Criteria for fish and aquatic life or recreation.
[b] Reference values are Tennessee Water Quality Criteria for Domestic Water Supply.
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Table 1.15. 2009 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		
1,2-Dichloroethane(µg/L)	1/2	0.67	<2	<1.4	5[b]	0
Aluminum (µg/L)	2/2	150	150	150		0
Barium (µg/L)	2/2	33	33	33		0
Boron (µg/L)	2/2	17	13	15		0
Cadmium (µg/L)	1/2	0.14	0.1	0.12	2.0	0
Calcium (µg/L)	2/2	37000	37000	37000		0
Chromium (µg/L)	1/2	1.8	0.14	0.97	100[b]	0
Copper (µg/L)	1/2	0.91	0.34	0.63	13	0
Dissolved oxygen (mg/L)	2/2	10	9.4	9.7	5.0 min	0
Iron (µg/L)	2/2	210	170	190		0
Lead (µg/L)	2/2	0.6	0.52	0.56	65	0
Lithium (µg/L)	2/2	4.1	2.8	3.5		0
Magnesium (µg/L)	2/2	11000	10000	10500		0
Manganese (µg/L)	2/2	42	37	40		0
Nickel (µg/L)	1/2	1.4	0.24	0.82	470	0
pH (standard units)	2/2	7.4	7.2	7.3	6.5-8.5	0
Potassium (µg/L)	2/2	2000	2000	2000		0
Selenium (µg/L)	1/2	0.57	0.53	0.55	20	0
Sodium (µg/L)	2/2	7800	6900	7400		0
Temperature (C°)	2/2	16	9.4	13		0
Vanadium (µg/L)	1/2	0.59	0.14	0.37		0
Zinc (µg/L)	2/2	11	1.6	6.3	120	0

[a]All reference values are Tennessee Water Quality Criteria for fish and aquatic life or recreation.
[b] Reference values are Tennessee Water Quality Criteria for Domestic Water Supply.

Table 1.16. 2009 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		
Alumnum (µg/L)	2/2	570	200	390	5.0 min	0
Barium (µg/L)	2/2	40	33	37		0
Boron (µg/L)	2/2	20	18	19		0
Calcium (µg/L)	2/2	32000	26000	29000		0
Chromium (µg/L)	2/2	0.92	0.78	0.85		0
Cobalt (µg/L)	1/2	0.3	0.27	0.29		0
Copper (µg/L)	2/2	1.1	0.71	0.91	13	0
Dissolved Oxygen (mg/L)	2/2	11	7.7	9.3	5 min	0
Iron (µg/L)	2/2	640	380	510		0
Lead (µg/L)	2/2	1.1	0.6	0.85	65	0
Lithium (µg/L)	2/2	4	1.7	2.9		0
Magnesium (µg/L)	2/2	7600	6700	7200		0
Manganese (µg/L)	2/2	110	64	87		0
Mercury (ng/L)	2/2	28	24	26	51	0
Nickel (µg/L)	2/2	1.8	1.7	1.8	470	0
Potassium (µg/L)	2/2	2000	1300	1650		0
pH (standard units)	2/2	7	7	7	6.5 - 8.5	0
Sodium (µg/L)	2/2	4400	3200	3800		0
Temperature (C°)	2/2	20	8	14		0
Vanadium (µg/L)	2/2	1	0.43	0.72		0
Zinc (µg/L)	2/2	13	3.4	8.2	120	0

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

Table 1.17. 2009 ETTP parameters detected at K-901-A

Parameter	Number detected/ number of Samples	Detected Results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
Aluminum (µg/L)	2/2	550	180	370		0
Arsenic (µg/L)	1/2	1.6	0.95	1.3	10	0
Barium (µg/L)	2/2	53	31	42		0
Beryllium (µg/L)	2/2	0.082	0.049	0.066		0
Boron (µg/L)	2/2	21	9	15		0
Cadmium (µg/L)	1/2	0.14	0.1	0.12	2.0	0
Calcium (µg/L)	2/2	50000	44000	47000		0
Chromium (µg/L)	2/2	7.8	6	7.2		0
Cobalt (µg/L)	1/2	0.42	0.27	0.35		0
Copper (µg/L)	2/2	1.8	1.3	1.6	13	0
Dissolved Oxygen (mg/L)	2/2	13	5.1	8.9	5.0 min	0
Iron (µg/L)	2/2	940	280	610		0
Lead (µg/L)	2/2	1.2	0.94	1.1	65	0
Lithium (µg/L)	2/2	2.4	0.45	1.7		0
Magnesium (µg/L)	2/2	14000	12000	13000		0
Manganese (µg/L)	2/2	85	24	55		0
Mercury (ng/L)	1/1	6.8	6.8	6.8	51	0
Nickel (µg/L)	2/2	1.8	1.2	1.5	470	0
pH (standard units)	2/2	7	6.8	6.9	6.5-8.5	0
Potassium (µg/L)	2/2	1500	1200	1400		0
Sodium (µg/L)	2/2	1100	870	990		0
Temperature (C°)	2/2	23	4.8	14		0
Vanadium (µg/L)	2/2	1.3	0.65	1.1		0
Zinc (µg/L)	2/2	19	16	18	120	0

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

Table 1.18. 2009 ETTP parameters detected at K-1007-B

Parameter	Number detected/ number of samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
Aluminum (µg/L)	2/2	900	460	680		0
Barium (µg/L)	2/2	38	30	34		0
Beryllium (µg/L)	1/2	0.07	0.038	0.054		0
Boron (µg/L)	2/2	18	11	14.5		0
Cadmium (µg/L)	2/2	0.16	0.16	0.16	2.0	0
Calcium (µg/L)	2/2	47000	34000	41000		0
Chromium (µg/L)	2/2	2.5	1.5	2		0
Cobalt (µg/L)	2/2	0.43	0.25	0.34		0
Copper (µg/L)	2/2	5.2	1.5	3.4	13	0
Dissolved Oxygen (mg/L)	2/2	12	9.6	11	5.0 min	0
Iron (µg/L)	2/2	820	570	700		0
Lead (µg/L)	2/2	1.6	1.2	1.4	65	0
Lithium (µg/L)	2/2	3	2.1	2.6		0
Magnesium (µg/L)	2/2	10000	8200	9100		0
Manganese (µg/L)	2/2	150	110	130		0
Mercury (ng/L)	1/1	17	17	17	51	0
Nickel (µg/L)	2/2	7.1	2.4	4.8	470	0
pH (standard units)	2/2	7.9	7.1	7.5	6.5 - 8.5	0
Potassium (µg/L)	2/2	2500	2400	2500		0
Silver (µg/L)	1/2	0.29	0.27	0.28	3.2	0
Sodium (µg/L)	2/2	3400	3000	3200		0
Temperature (C°)	2/2	26	7	16		0
Vanadium (µg/L)	2/2	1.5	1.5	1.5		0
Zinc (µg/L)	2/2	46	16	31	120	0

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

Table 1.19. 2009 ETTP parameters detected at K-1700

Parameter	Number detected/ number of Samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
1,1-Dichloroethane (µg/L)	4/4	1.5	0.95	1.2		0
1,2 Dichloroethane (µg/L)	2/4	<2	0.25	<1.3	370	0
1,1 Dichloroethene (µg/L)	4/4	1.1	0.65	0.84	7100	0
1,1,1 Trichloroethane (µg/L)	3/4	<2	0.19	<0.69		0
Aluminum (µg/L)	4/4	460	32	170		0
Arsenic (µg/L)	1/4	0.95	0.67	0.84	10.0	0
Barium (µg/L)	4/4	74	48	59		0
Beryllium (µg/L)	2/4	0.049	0.037	0.041		0
Boron (µg/L)	4/4	46	23	31	1400	0
Bromoform (µg/L)	1/4	<2	0.34	<1.6		0
Calcium (µg/L)	4/4	90000	54000	70000		0
Carbon tetrachloride (µg/L)	4/4	7.2	1.2	3.9	16	0
Chloroethane (µg/L)	1/4	<2	0.44	<1.6		0
Chloroform (µg/L)	4/4	2.6	0.74	1.4	4700	0
Chloromethane (µg/L)	1/4	<2	0.26	<1.6		0
Chromium (µg/L)	4/4	1.7	1.1	1.5		0
Chromium, hexavalent (µg/L)	1/4	<0.006	<0.002	<0.004	16	0
cis-1,2 Dichloroethene (µg/L)	4/4	54	24	35		0
Cobalt (µg/L)	1/4	0.27	0.13	0.18		0
Copper (µg/L)	4/4	2.4	0.88	1.4	13	0
Dissolved Oxygen (mg/L)	4/4	11	5.2	8.3	5.0 min	0
Iron (µg/L)	4/4	520	170	280		0
Lead (µg/L)	4/4	0.89	0.47	0.63	65	0
Lithium (µg/L)	4/4	6.7	2.9	4.3		0
Magnesium (µg/L)	4/4	14000	11000	13000		0
Manganese (µg/L)	4/4	270	100	180		0
Mercury (ng/L)	1/1	8.1	8.1	8.1	51	0
Nickel (µg/L)	4/4	7	6.3	6.7	470	0
Potassium (µg/L)	4/4	3700	2200	2600		0
Sodium (µg/L)	4/4	9700	5900	7400		0
Temperature (C°)	4/4	22	6.9	14		0
Tetrachloroethene (µg/L)	4/4	0.86	0.72	0.79	33	0
Thallium (µg/L)	2/8	1.1	.41	0.77	0.47	1
Trans-1,2 dichloroethene (µg/L)	4/4	0.66	0.3	0.41	10000	0
Trichloroethene (µg/L)	4/4	57	26	37	300	0
Vanadium (µg/L)	3/4	0.94	0.28	0.51		0
Vinyl Chloride (µg/L)	4/4	4.3	1.6	2.7	24	0
pH (standard units)	4/4	7.1	6.8	6.9	6.5 - 8.5	0
Zinc (µg/L)	4/4	8.9	4.9	6.1	120	0

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

Table 1.20. 2009 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		
Aluminum (µg/L)	2/2	360	110	240		0
Arsenic (µg/L)	1/2	0.95	0.87	0.91	10.0	0
Barium (µg/L)	2/2	43	34	39		0
Beryllium (µg/L)	2/2	0.057	0.046	0.052		0
Boron (µg/L)	2/2	840	29	440		0
Calcium (µg/L)	2/2	33000	33000	33000		0
Chromium (µg/L)	2/2	0.71	0.49	0.6		0
Cobalt (µg/L)	1/2	<0.27	0.25	<0.26		0
Copper (µg/L)	2/2	0.58	0.52	0.55	13	0
Dissolved Oxygen (mg/L)	2/2	12	7.5	9.6	5.0 min	0
Iron (µg/L)	2/2	540	220	380		0
Lead(µg/L)	2/2	0.63	0.47	0.55	65	0
Lithium (µg/L)	2/2	3.8	2.1	3		0
Magnesium (µg/L)	2/2	8200	7600	7900		0
Manganese (µg/L)	2/2	110	48	79		0
Mercury (ng/L)	1/2	17	7.8	12	51	0
Nickel (µg/L)	2/2	1.5	1.4	1.5	470	0
pH (standard units)	2/2	7.2	7.1	7.2	6.5 - 8.5	0
Potassium (µg/L)	2/2	1800	1500	1700		0
Sodium (µg/L)	2/2	4900	4100	4500		0
Temperature (C°)	2/2	19	7.9	14		0
Vanadium (µg/L)	1/2	0.7	0.28	0.49		0
Zinc (µg/L)	2/2	4.7	2.6	3.7	120	0

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

Table 1.21. 2009 ETTP parameters detected at MIK 0.45

Parameter	Number detected/ number of Samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
1,1-Dichloroethane (µg/L)	4/4	2.9	1.1	2		0
1,1,1-Trichloroethane (µg/L	4/4	0.52	0.26	0.37		0
1,1 Dichloroethene (µg/L)	4/4	1.8	0.85	1.3	7100	0
1,2 Dichlorethane (ug/L)	2/4	<2	0.26	<1.3	370	0
Aluminum (µg/L)	4/4	260	31	120		0
Barium (µg/L)	4/4	73	48	58		0
Beryllium (µg/L)	2/4	0.058	0.039	0.048		0
Boron (µg/L)	4/4	45	21	31	1400	0
Bromoform (µg/L)	1/4	<2	0.32	<1.6		0
Calcium (µg/L)	4/4	86000	49000	65000	16	0
Carbon tetrachloride (µg/L)	1/4	<2	0.26	<1.6		0
Chloroethane (µg/L)	1/4	<2	0.42	<1.6		0
Chloroform (µg/L)	2/4	<2	0.17	<1.2	4700	0
Chloromethane (µg/L)	1/4	<2	0.26	<1.6		0
Chromium (µg/L)	4/4	1.3	0.63	1		0
Chromium, hexavalent (µg/L)	1/4	<6	2	<3	16	0
Cis-1,2 Dichloroethene (µg/L)	4/4	44	17	30		0
Copper (µg/L)	4/4	2.7	0.84	1.4	13	0
Dissolved Oxygen (mg/L)	4/4	11	6.5	9.2	5.0 min.	0
Iron (µg/L)	4/4	320	160	220		0
Lead (µg/L)	4/4	0.76	0.5	0.63	65	0
Lithium (µg/L)	4/4	6.6	2.5	4.4		0
Magnesium (µg/L)	4/4	14000	11000	13000		0
Manganese (µg/L)	4/4	180	67	120		0
Mercury (ng/L)	1/1	6	6	6	51	0
Nickel (µg/L)	4/4	5.9	5.1	5.6	470	0
pH (standard units)	4/4	7.4	7.1	7.3	6.5 - 8.5	0
Potassium (µg/L)	4/4	3600	2000	2500		0
Sodium (µg/L)	4/4	9100	5100	6900		0
Temperature (C°)	4/4	23	9.1	14		0
Tetrachloroethene (µg/L)	4/4	1.4	1	1.3	33	0
Trans-1,2, Dichloroethene (µg/L)	4/4	0.39	0.19	0.29	10000	0
Trichloroethene (µg/L)	4/4	32	13	22	300	0
Vanadium (µg/L)	4/4	0.66	0.31	0.43		0
Vinyl chloride (µg/L)	4/4	6.1	1.3	3.6	24	0
Zinc (µg/L)	4/4	10	3.3	5.7	120	0

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

Table 1.22. 2009 ETTP parameters detected at MIK 0.59

Parameter	Number detected/ number of Samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
1,1-Dichloroethane (µg/L)	4/4	0.98	0.58	0.75		0
1,1,1-Trichloroethane (µg/L)	2/4	<2	0.18	<0.66		0
1,1 Dichloroethene (µg/L)	4/4	0.77	0.43	0.56	7100	0
1,2 Dichlorethane (ug/L)	2/4	<2	0.21	<1.28	370	0
Aluminum (µg/L)	4/4	300	30	150		0
Barium (µg/L)	4/4	69	41	54		0
Boron (µg/L)	4/4	26	12	18	1400	0
Bromoform (µg/L)	1/4	<2	0.31	<1.6		0
Calcium (µg/L)	4/4	78000	46000	58000		0
Chloroethane (µg/L)	1/4	<2	0.42	<1.6		0
Chloromethane (µg/L)	1/4	<2	0.29	<1.6		0
Chromium (µg/L)	4/4	1.2	0.56	0.89		0
Chromium, hexavalent (µg/L)	1/4	<6	<2	<3.3	16	0
Cis-1,2 Dichloroethene (µg/L)	4/4	18	10	14		0
Copper (µg/L)	4/4	2	0.56	1.1	13	0
Dissolved Oxygen (mg/L)	4/4	11	6	9.4	5.0 min.	0
Iron (µg/L)	4/4	310	150	220		0
Lead (µg/L)	3/4	0.83	0.29	0.49	65	0
Lithium (µg/L)	4/4	4.4	1.6	2.9		0
Magnesium (µg/L)	4/4	14000	11000	12000		0
Manganese (µg/L)	4/4	250	49	130		0
Mercury (ng/L)	1/1	5.6	5.6	5.6	51	0
Nickel (µg/L)	4/4	5	2.8	4.1	470	0
pH (standard units)	4/4	7.6	7.1	7.5	6.5 - 8.5	0
Potassium (µg/L)	4/4	2900	1600	2000		0
Sodium (µg/L)	4/4	8100	4400	5900		0
Temperature (C°)	4/4	24	8.9	15		0
Tetrachloroethene (µg/L)	4/4	0.97	0.64	0.77	33	0
Trans-1,2, Dichloroethene (µg/L)	1/4	<2	0.18	<1.6	10000	0
Trichloroethene (µg/L)	4/4	11	6.7	8.6	300	0
Vanadium (µg/L)	3/4	0.56	0.17	0.33		0
Vinyl chloride (µg/L)	4/4	1.5	0.4	0.82	24	0
Zinc (µg/L)	4/4	10	4.3	6.3	120	0

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

Table 1.23. 2009 ETTP parameters detected at MIK 0.71

Parameter	Number detected/ number of Samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
1,2 Dichlorethane (ug/L)	2/4	<2	0.2	<1.3	370	0
Aluminum (µg/L)	4/4	330	63	160		0
Arsenic (µg/L)	1/4	<0.95	<0.67	<0.79	10	0
Barium (µg/L)	4/4	70	40	52		0
Boron (µg/L)	4/4	26	12	18		0
Beryllium (µg/L)	2/4	0.04	0.033	0.038		0
Boron (µg/L)	4/4	840	13	220	1400	0
Bromoform (µg/L)	1/4	<2	0.32	<1.6		0
Calcium (µg/L)	4/4	74000	42000	54000		0
Chloroethane (µg/L)	1/4	<2	0.3	<1.6		0
Chloromethane (µg/L)	1/4	<2	0.27	<1.6		0
Chromium (µg/L)	4/4	1.2	0.8	0.91		0
Chromium, hexavalent (µg/L)	1/4	<6	2	<3.3	16	0
Cis-1,2 Dichloroethene (µg/L)	4/4	4.1	1.9	2.6		0
Cobalt (µg/L)	1/4	<0.27	<0.13	<0.18		0
Copper (µg/L)	4/4	2	1	1.3	13	0
Dissolved Oxygen (mg/L)	4/4	11	6.1	8.9	5.0 min.	0
Iron (µg/L)	4/4	360	260	270		0
Lead (µg/L)	3/4	0.97	0.3	0.6	65	0
Lithium (µg/L)	4/4	4.6	1.5	2.9		0
Magnesium (µg/L)	4/4	14000	10000	12000		0
Manganese (µg/L)	4/4	390	63	170		0
Mercury (ng/L)	1/1	2.6	2.6	2.6	51	0
Nickel (µg/L)	4/4	6.3	4.2	5.0	470	0
pH (standard units)	4/4	7.6	7.2	7.3	6.5 - 8.5	0
Potassium (µg/L)	4/4	2800	1500	1900		0
Sodium (µg/L)	4/4	8300	4000	5500		0
Temperature (C°)	4/4	23	8.9	15		0
Tetrachloroethene (µg/L)	4/4	1.3	0.61	0.98	33	0
Trichloroethene (µg/L)	4/4	1.6	0.94	1.4	300	0
Vanadium (µg/L)	4/4	0.68	0.26	0.54		0
Vinyl chloride (µg/L)	1/4	<2	0.26	<1.6	24	0
Zinc (µg/L)	4/4	15	4.7	7.4	120	0

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

Table 1.24. 2009 ETTP parameters detected at MIK 1.4

Parameter	Number detected/ number of Samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
1,2 Dichlorethane (ug/L)	2/4	<2	0.2	<1.3	370	0
Aluminum (µg/L)	4/4	430	140	240		0
Arsenic (µg/L)	1/4	0.95	0.67	0.82	10	0
Barium (µg/L)	4/4	66	41	50		0
Beryllium (µg/L)	1/4	0.052	0.031	0.04		0
Boron (µg/L)	4/4	9.8	6	7.5		0
Bromoform (µg/L)	1/4	<2	0.36	<1.6	1400	0
Cadmium (µg/L)	1/4	0.24	0.094	<0.15	2.0	0
Calcium (µg/L)	4/4	22000	12000	16000		0
Chloroethane (µg/L)	1/4	<2	0.43	<1.6		0
Chloromethane (µg/L)	1/4	<2	0.29	<1.6		0
Chromium (µg/L)	3/4	0.66	0.18	0.51		0
Chromium, hexavalent (µg/L)	2/4	<6	<2	<3.6	16	0
Cobalt (µg/L)	4/4	0.48	0.32	0.38		0
Copper (µg/L)	3/4	1	0.18	0.56	13	0
Dissolved Oxygen (mg/L)	4/4	11	6.4	9	5.0 min.	0
Iron (µg/L)	4/4	610	280	460		0
Lead (µg/L)	4/4	1.4	0.47	0.9	65	0
Lithium (µg/L)	4/4	2	0.25	1.3		0
Magnesium (µg/L)	4/4	12000	6400	8400		0
Manganese (µg/L)	4/4	200	85	140		0
Mercury (ng/L)	1/1	1.8	1.8	1.8	51	0
Nickel (µg/L)	4/4	1.8	1.3	1.6	470	0
pH (standard units)	4/4	7.4	7.1	7.3	6.5 - 8.5	0
Potassium (µg/L)	4/4	930	600	740		0
Sodium (µg/L)	4/4	990	720	900		0
Temperature (C°)	4/4	22	7.3	14		0
Vanadium (µg/L)	3/4	0.74	0.28	0.5		0
Zinc (µg/L)	4/4	66	3.6	22	120	0

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

Table 2.1. Constituents Detected in Exit Pathway Groundwater at ORNL, 2009 (a)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Well 857 - WOC Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	0.01	0.01	n/a
Dissolved Oxygen (ppm)	6.0	8.4	n/a
pH (Std Unit)	4.2	4.4	n/a
RedOx (mV)	310	440	n/a
Temperature (deg C)	15	16	n/a
Turbidity (NTU)	0.0	0.0	1[2]
Metals (mg/L)			
Aluminum	0.41	0.26	(0.05, 0.2)[3]
Arsenic	<0.0015	0.0078	0.01[1]
Barium	0.013	0.012	2[1]
Boron	0.01	0.005	n/a
Calcium	0.39	0.41	n/a
Chromium	0.0048	0.011	0.1[1]
Cobalt	0.0003	0.00037	n/a
Copper	0.00073	0.0018	1.3[2]
Iron	0.29	0.22	0.3[3]
Lead	0.0019	0.0015	0.005[1]
Magnesium	0.91	0.97	n/a
Manganese	0.015	0.013	0.05[3]
Molybdenum	0.00018	0.00017	n/a
Nickel	0.0032	0.0054	0.1[1]
Potassium	0.43	0.41	n/a
Silicon	4.9	4.4	n/a
Sodium	0.81	0.62	n/a
Strontium	0.0028	0.0023	n/a
Sulfur	0.017	0.067	n/a
Thallium	<0.0003	0.00035	0.002[1]
Titanium	0.0044	0.0038	n/a
Zinc	0.0062	0.0072	5[3]

Table 2.1. (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Radionuclides (pCi/L) (d)			
Beta activity	17*	2.1*	50[2]
Bismuth-214		11*	24,000[4]
Tritium	580*	660*	20,000[2]
Semi-volatile organics (ug/L)			
Bis(2-ethylhexyl)phthalate	BJ2.3	U10	n/a
Well 858 - WOC Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	0.2	0.19	n/a
Dissolved Oxygen (ppm)	2.2	2.2	n/a
pH (Std Unit)	7.0	7.0	n/a
RedOx (mV)	180	210	n/a
Temperature (deg C)	15	15	n/a
Turbidity (NTU)	1.0	1.0	1[2]
Metals (mg/L)			
Aluminum	0.01	0.018	(0.05, 0.2)[3]
Arsenic	<0.0015	0.0037	0.01[1]
Barium	0.12	0.12	2[1]
Boron	0.009	0.0076	n/a
Calcium	31	31	n/a
Cobalt	<0.0001	0.0001	n/a
Copper	0.001	0.0004	1.3[2]
Iron	0.11	0.1	0.3[3]
Lithium	0.0059	0.0047	n/a
Magnesium	6.2	6.7	n/a
Manganese	0.0013	0.0033	0.05[3]
Molybdenum	0.00033	0.00038	n/a
Nickel	0.00089	0.00068	0.1[1]
Phosphorous	0.02	0.024	n/a
Potassium	1.0	1.0	n/a
Silicon	7.5	7.1	n/a
Sodium	5.1	5.1	n/a
Strontium	0.091	0.09	n/a
Sulfur	4.2	4.2	n/a
Thallium	0.00048	<0.0003	0.002[1]

Table 2.1. (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Uranium	0.00012	0.0001	n/a
Zinc	0.0041	0.0033	5[3]
Radionuclides (pCi/L) (d)			
Beta activity	19*	3.7*	50[2]
Potassium-40	U-11	54*	280[4]
Semi-volatile organics (ug/L)			
Bis(2-ethylhexyl)phthalate	BJ2.5	J2.4	n/a
Well 1190 - WOC Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	0.75	0.75	n/a
Dissolved Oxygen (ppm)	2.1	2.3	n/a
pH (Std Unit)	6.0	5.9	n/a
RedOx (mV)	-130	-130	n/a
Temperature (deg C)	16	18	n/a
Turbidity (NTU)	5.0	4.0	1[2]
Metals (mg/L)			
Antimony	0.00071	<0.001	0.006[1]
Arsenic	<0.0015	0.0026	0.01[1]
Barium	E0.65	0.74	2[1]
Boron	0.037	0.03	n/a
Calcium	140	150	n/a
Cobalt	0.0003	0.00023	n/a
Copper	0.00084	0.00035	1.3[2]
Iron	0.49	0.39	0.3[3]
Lithium	0.023	0.023	n/a
Magnesium	19	E19	n/a
Manganese	0.062	0.081	0.05[3]
Molybdenum	0.00027	<0.00017	n/a
Nickel	0.0094	0.0023	0.1[1]
Potassium	2.1	2.0	n/a
Silicon	8.6	8.6	n/a
Silver	0.0014	<0.0002	0.1[3]
Sodium	E12	13	n/a
Strontium	E0.44	0.47	n/a
Sulfur	0.4	0.51	n/a
Thallium	<0.0003	0.00038	0.002[1]

Table 2.1. (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Uranium	0.00016	0.00035	n/a
Vanadium	<0.003	0.0055	n/a
Radionuclides (pCi/L) (d)			
Bismuth-214	20*	20*	24,000[4]
Lead-214	19*	25*	8,000[4]
Tritium	21,000*	27,000*	20,000[2]
Semi-volatile organics (ug/L)			
Bis(2-ethylhexyl)phthalate	J5.9	U10	n/a
Volatile organics (ug/L)			
Acetone	8.6	U5.0	n/a
Carbon disulfide	J2.6	U5.0	n/a
Well 1191 - WOC Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	0.46	0.46	n/a
Dissolved Oxygen (ppm)	1.9	2.1	n/a
pH (Std Unit)	5.9	5.9	n/a
RedOx (mV)	-97	-120	n/a
Temperature (deg C)	15	19	n/a
Turbidity (NTU)	3.0	4.0	1[2]
Metals (mg/L)			
Aluminum	0.0092	0.019	(0.05, 0.2)[3]
Arsenic	0.002	0.0045	0.01[1]
Barium	E0.2	0.16	2[1]
Boron	0.019	0.017	n/a
Calcium	59	70	n/a
Cobalt	0.00048	0.00045	n/a
Copper	0.0006	<0.00033	1.3[2]
Iron	9.1	4.8	0.3[3]
Magnesium	13	E15	n/a
Manganese	0.39	0.44	0.05[3]
Molybdenum	0.00041	0.00055	n/a
Nickel	0.0023	0.0021	0.1[1]
Phosphorous	0.15	0.044	n/a

Table 2.1. (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Potassium	3.9	4.6	n/a
Silicon	3.2	3.5	n/a
Sodium	E13	15	n/a
Strontium	E0.13	0.15	n/a
Sulfur	0.25	0.18	n/a
Uranium	0.00021	0.00072	n/a
Zinc	0.0028	<0.003	5[3]
Radionuclides (pCi/L) (d)			
Alpha activity	U5.9*	13*	15[2]
Beta activity	330*	330*	50[2]
Bismuth-214	9.0*		24,000[4]
Lead-214	8.6*		8,000[4]
Strontium-89/90	170*	150*	40[4]
Tritium	47,000*	36,000*	20,000[2]
Semi-volatile organics (ug/L)			
Bis(2-ethylhexyl)phthalate	J4.4	U11	n/a
Volatile organics (ug/L)			
Acetone	8.8	U5.0	n/a
Well 1239 - WOC Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	0.79	0.81	n/a
Dissolved Oxygen (ppm)	1.7	1.7	n/a
pH (Std Unit)	9.0	8.6	n/a
RedOx (mV)	210	220	n/a
Temperature (deg C)	14	15	n/a
Turbidity (NTU)	1.0	1.0	1[2]
Metals (mg/L)			
Aluminum	0.14	0.07	(0.05, 0.2)[3]
Arsenic	0.0024	0.0021	0.01[1]
Barium	0.052	0.056	2[1]
Boron	0.68	0.77	n/a
Calcium	0.82	0.98	n/a
Chromium	0.0017	<0.002	0.1[1]

Table 2.1. (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Copper	0.002	0.002	1.3[2]
Iron	0.097	0.065	0.3[3]
Lithium	0.039	0.037	n/a
Magnesium	0.19	0.23	n/a
Manganese	0.002	0.0019	0.05[3]
Molybdenum	0.0016	0.0017	n/a
Nickel	0.0011	0.001	0.1[1]
Phosphorous	0.057	0.067	n/a
Potassium	1.7	1.8	n/a
Silicon	5.1	4.9	n/a
Sodium	210	250	n/a
Strontium	0.052	0.055	n/a
Sulfur	11	10	n/a
Thorium	0.00027	0.0005	n/a
Titanium	0.0074	0.0036	n/a
Uranium	0.0012	0.0013	n/a
Zinc	0.0039	0.0048	5[3]
Zirconium	0.0014	0.0017	n/a
Semi-volatile organics (ug/L)			
Bis(2-ethylhexyl)phthalate	BJ3.4	19	n/a
Well 807 - Northwestern Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	0.94	0.92	n/a
Dissolved Oxygen (ppm)	3.3	3.4	n/a
pH (Std Unit)	5.8	6.4	n/a
RedOx (mV)	-7.0	160	n/a
Temperature (deg C)	12	21	n/a
Turbidity (NTU)	6.0	4.0	1[2]
Metals (mg/L)			
Aluminum	0.01	<0.015	(0.05, 0.2)[3]
Antimony	0.00071	<0.001	0.006[1]
Arsenic	0.0052	0.0077	0.01[1]
Barium	0.086	0.086	2[1]
Beryllium	<0.0001	0.00023	0.004[1]
Boron	0.078	0.1	n/a
Calcium	170	140	n/a

Table 2.1. (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Cobalt	0.0022	0.0013	n/a
Copper	0.00094	0.0007	1.3[2]
Iron	E6.6	4.6	0.3[3]
Lithium	0.0032	0.0073	n/a
Magnesium	20	16	n/a
Manganese	6.7	5.5	0.05[3]
Molybdenum	0.00062	0.00064	n/a
Nickel	0.0071	0.0038	0.1[1]
Phosphorous	0.046	0.024	n/a
Potassium	1.3	1.4	n/a
Silicon	4.8	5.4	n/a
Silver	0.00027	<0.0002	0.1[3]
Sodium	39	37	n/a
Strontium	0.41	0.38	n/a
Sulfur	29	18	n/a
Thallium	0.00062	0.00034	0.002[1]
Uranium	0.0015	0.0011	n/a
Vanadium	<0.003	0.0089	n/a
Zinc	0.0041	0.0037	5[3]
Zirconium	0.0007	<0.00066	n/a
Radionuclides (pCi/L) (d)			
Beta activity	12*	16*	50[2]
Bismuth-214		24*	24,000[4]
Strontium-89/90	2.0*	1.8*	40[4]
Tritium	300*	500*	20,000[2]
Well 808 - Northwestern Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	1.1	1.1	n/a
Dissolved Oxygen (ppm)	4.5	4.7	n/a
pH (Std Unit)	7.0	6.8	n/a
RedOx (mV)	30	54	n/a
Temperature (deg C)	15	22	n/a
Turbidity (NTU)	7.0	3.0	1[2]
Metals (mg/L)			
Arsenic	<0.0015	0.0064	0.01[1]
Barium	0.031	0.014	2[1]

Table 2.1. (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Boron	1.2	0.98	n/a
Calcium	8.9	3.8	n/a
Chromium	<0.0015	0.0062	0.1[1]
Cobalt	0.00017	0.00011	n/a
Copper	0.0016	0.0008	1.3[2]
Iron	E0.053	0.16	0.3[3]
Lithium	0.13	0.098	n/a
Magnesium	9.4	6.0	n/a
Manganese	0.0019	<0.001	0.05[3]
Molybdenum	0.001	0.0017	n/a
Nickel	0.0057	0.0024	0.1[1]
Potassium	6.5	5.5	n/a
Silicon	6.0	4.5	n/a
Sodium	270	190	n/a
Strontium	1.2	0.52	n/a
Sulfur	34	35	n/a
Uranium	<0.00005	0.00026	n/a
Vanadium	0.0033	0.0081	n/a
Zinc	0.0034	<0.003	5[3]
Zirconium	0.00071	<0.00066	n/a
Radionuclides (pCi/L) (d)			
Beta activity	22*	14*	50[2]
Potassium-40	U0.0	45*	280[4]
Spring BC-01 - 7000 Area/Bearden Creek Watershed(e)			
Field measurements			
Conductivity (mS/cm)	0.1		n/a
Dissolved Oxygen (ppm)	8.5		n/a
pH (Std Unit)	6.5		n/a
Temperature (deg C)	14		n/a
Turbidity (NTU)	19		1[2]
Metals (mg/L)			
Aluminum	1.6		(0.05, 0.2)[3]
Arsenic	0.0016		0.01[1]
Barium	0.025		2[1]
Boron	0.0098		n/a
Calcium	12		n/a

Table 2.1. (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Cobalt	0.00056		n/a
Copper	0.0018		1.3[2]
Iron	1.3		0.3[3]
Lead	0.001		0.005[1]
Magnesium	2.2		n/a
Manganese	0.026		0.05[3]
Molybdenum	0.00013		n/a
Nickel	0.0014		0.1[1]
Potassium	2.2		n/a
Silicon	7.0		n/a
Sodium	0.83		n/a
Strontium	0.021		n/a
Sulfur	3.0		n/a
Thorium	0.00034		n/a
Titanium	0.015		n/a
Zinc	0.0094		5[3]
Zirconium	0.0008		n/a
Well 923 - East End Discharge Point			
Field measurements			
Conductivity (mS/cm)	0.42	0.43	n/a
Dissolved Oxygen (ppm)	1.5	0.8	n/a
pH (Std Unit)	6.6	6.9	n/a
RedOx (mV)	140	270	n/a
Temperature (deg C)	16	19	n/a
Turbidity (NTU)	3.0	3.0	1[2]
Metals (mg/L)			
Aluminum	0.031	0.021	(0.05, 0.2)[3]
Arsenic	0.0019	0.0039	0.01[1]
Barium	0.12	0.11	2[1]
Boron	0.023	0.022	n/a
Calcium	76	70	n/a
Cobalt	0.00013	0.00011	n/a
Copper	0.0015	0.0013	1.3[2]
Iron	6.8	2.3	0.3[3]
Lead	0.0008	0.00093	0.005[1]
Lithium	0.014	0.012	n/a
Magnesium	13	E13	n/a

Table 2.1. (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Manganese	0.083	0.085	0.05[3]
Molybdenum	0.00016	0.00019	n/a
Nickel	0.00099	0.0015	0.1[1]
Phosphorous	0.076	0.023	n/a
Potassium	1.9	1.7	n/a
Silicon	10	9.9	n/a
Sodium	4.3	4.4	n/a
Strontium	0.49	0.47	n/a
Sulfur	17	19	n/a
Thallium	0.00058	0.00045	0.002[1]
Titanium	0.0024	<0.002	n/a
Vanadium	0.0036	0.0052	n/a
Zinc	0.0037	0.0036	5[3]
Radionuclides (pCi/L) (d)			
Beta activity	17*	U9.1*	50[2]
Semi-volatile organics (ug/L)			
Bis(2-ethylhexyl)phthalate	28	J5.3	n/a
Spring/Surface Water Monitoring Point EE-01 - East End Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	0.23	0.29	n/a
Dissolved Oxygen (ppm)	8.8	6.4	n/a
pH (Std Unit)	6.2	7.2	n/a
Temperature (deg C)	12	23	n/a
Turbidity (NTU)	8.0	1.0	1[2]
Metals (mg/L)			
Aluminum	0.6	0.25	(0.05, 0.2)[3]
Arsenic	<0.0015	0.0028	0.01[1]
Barium	0.051	0.059	2[1]
Boron	0.021	0.023	n/a
Calcium	30	36	n/a
Cobalt	0.0003	0.00025	n/a
Copper	0.00079	0.00091	1.3[2]
Iron	0.56	0.4	0.3[3]
Magnesium	5.7	7.0	n/a
Manganese	0.047	0.13	0.05[3]
Molybdenum	0.00026	0.00042	n/a

Table 2.1. (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Nickel	0.001	0.001	0.1[1]
Potassium	1.5	2.1	n/a
Silica		9.2	n/a
Silicon	3.9	4.2	n/a
Sodium	4.2	4.0	n/a
Strontium	0.073	0.079	n/a
Sulfur	6.1	5.6	n/a
Thallium	0.00046	0.00041	0.002[1]
Thorium	0.00021	<0.0003	n/a
Titanium	0.0063	0.0039	n/a
Uranium	0.00008	0.00017	n/a
Zinc	0.004	0.026	5[3]
Zirconium	0.00089	<0.00066	n/a
Radionuclides (pCi/L) (d)			
Beta activity	U3.2	2.2*	50[2]
Semi-volatile organics (ug/L)			
Bis(2-ethylhexyl)phthalate	J6.5	U10	n/a
Spring/Surface Water Monitoring Point EE-02 - East End Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	0.42	0.52	n/a
Dissolved Oxygen (ppm)	7.6	7.1	n/a
pH (Std Unit)	6.3	7.3	n/a
Temperature (deg C)	14	22	n/a
Turbidity (NTU)	33	5.0	1[2]
Metals (mg/L)			
Aluminum	0.019	0.71	(0.05, 0.2)[3]
Arsenic	<0.0015	0.0027	0.01[1]
Barium	0.023	0.049	2[1]
Boron	0.0044	0.012	n/a
Cadmium	0.00012	<0.00011	0.005[1]
Calcium	37	54	n/a
Cobalt	0.00015	0.0028	n/a
Copper	0.00058	0.0014	1.3[2]
Iron	0.11	1.1	0.3[3]
Lead	<0.0005	0.0018	0.005[1]
Magnesium	23	E30	n/a

Table 2.1. (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Manganese	0.0023	0.97	0.05[3]
Molybdenum	0.00015	0.00032	n/a
Nickel	0.00064	0.0013	0.1[1]
Phosphorous	<0.02	0.057	n/a
Potassium	0.37	0.89	n/a
Silica		12	n/a
Silicon	3.3	5.4	n/a
Sodium	0.49	0.69	n/a
Strontium	0.018	0.028	n/a
Sulfur	1.5	0.92	n/a
Titanium	<0.002	0.01	n/a
Uranium	0.0002	0.0004	n/a
Zinc	0.0026	0.0069	5[3]
Radionuclides (pCi/L) (d)			
Beta activity	32*	U2.0*	50[2]
Bismuth-214	17*		24,000[4]
Lead-214	9.3*		8,000[4]
Well 531 - Northwestern Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	0.89	0.8	n/a
Dissolved Oxygen (ppm)	1.3	0.3	n/a
pH (Std Unit)	7.4	8.3	n/a
RedOx (mV)	-220	-340	n/a
Temperature (deg C)	16	20	n/a
Turbidity (NTU)	5.0	9.0	1[2]
Metals (mg/L)			
Aluminum	0.059	1.6	(0.05, 0.2)[3]
Arsenic	<0.0015	0.0027	0.01[1]
Barium	0.044	0.065	2[1]
Beryllium	<0.0001	0.00011	0.004[1]
Boron	0.99	0.82	n/a
Calcium	2.8	14	n/a
Chromium	<0.0015	0.0026	0.1[1]
Cobalt	<0.0001	0.00081	n/a
Copper	0.0009	0.0098	1.3[2]
Iron	0.14	2.1	0.3[3]

Table 2.1. (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Lead	<0.0005	0.0024	0.005[1]
Lithium	0.13	0.11	n/a
Magnesium	1.3	E1.7	n/a
Manganese	0.0041	0.028	0.05[3]
Molybdenum	0.00015	0.00029	n/a
Nickel	0.0012	0.0092	0.1[1]
Phosphorous	0.03	0.078	n/a
Potassium	2.0	2.0	n/a
Silicon	5.7	10	n/a
Sodium	210	190	n/a
Strontium	0.22	0.23	n/a
Sulfur	1.6	2.4	n/a
Titanium	<0.002	0.012	n/a
Vanadium	<0.003	0.0085	n/a
Zinc	0.0041	0.058	5[3]
Zirconium	0.00067	0.0013	n/a
Radionuclides (pCi/L) (d)			
Beta activity	17*	13*	50[2]
Well 535 - Northwestern Discharge Area Exit Pathway			
Anions (mg/L)			
Bromide	J0.16	0.2	n/a
Chloride	21	19	250[3]
Fluoride	0.11	0.11	4[2]
Sulfate	8.1	7.9	250[3]
Field measurements			
Conductivity (mS/cm)	0.66	0.64	n/a
Dissolved Oxygen (ppm)	1.5	1.4	n/a
pH (Std Unit)	6.6	6.3	n/a
RedOx (mV)	120	150	n/a
Temperature (deg C)	16	21	n/a
Turbidity (NTU)	4.0	4.0	1[2]
Metals (mg/L)			
Aluminum	0.45	0.044	(0.05, 0.2)[3]
Arsenic	<0.0015	0.0019	0.01[1]
Barium	0.095	0.088	2[1]
Boron	0.023	0.032	n/a

Table 2.1. (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Calcium	E120	150	n/a
Cobalt	0.001	0.00076	n/a
Copper	0.0011	0.00093	1.3[2]
Iron	6.1	3.5	0.3[3]
Lead	0.0019	0.0012	0.005[1]
Lithium	0.0025	<0.002	n/a
Magnesium	8.9	9.3	n/a
Manganese	2.0	1.8	0.05[3]
Molybdenum	0.0003	<0.00017	n/a
Nickel	0.0028	0.0031	0.1[1]
Potassium	0.85	0.8	n/a
Silicon	3.1	7.2	n/a
Sodium	6.5	6.4	n/a
Strontium	0.35	0.3	n/a
Sulfur	6.9	2.9	n/a
Titanium	0.0058	<0.002	n/a
Uranium	0.00035	0.00035	n/a
Zinc	0.017	0.01	5[3]
Other			
Alkalinity as CaCO3 (mg/L)	340	310	n/a
Radionuclides (pCi/L) (d)			
Bismuth-214	41*	15*	24,000[4]
Lead-214	42*		8,000[4]
Tritium	510*	330*	20,000[2]
Semi-volatile organics (ug/L)			
Diethyl phthalate	J2.5	U10	n/a
Volatile organics (ug/L)			
Toluene	J0.26	J0.33	1,000[1]
Spring/Surface Water Monitoring Point S-01 - Southern Discharge Area Exit Pathway(e)			
Field measurements			
Conductivity (mS/cm)	0.32		n/a
Dissolved Oxygen (ppm)	7.4		n/a
pH (Std Unit)	6.5		n/a

Table 2.1. (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Temperature (deg C)	13		n/a
Turbidity (NTU)	70		1[2]
Metals (mg/L)			
Aluminum	0.16		(0.05, 0.2)[3]
Barium	0.032		2[1]
Boron	0.0078		n/a
Calcium	34		n/a
Cobalt	0.00024		n/a
Copper	0.00075		1.3[2]
Iron	0.25		0.3[3]
Magnesium	15		n/a
Manganese	0.0088		0.05[3]
Nickel	0.00083		0.1[1]
Potassium	0.95		n/a
Silicon	3.6		n/a
Sodium	0.72		n/a
Strontium	0.025		n/a
Sulfur	0.85		n/a
Titanium	0.0022		n/a
Uranium	0.00014		n/a
Zinc	0.0066		5[3]
Zirconium	0.00055		n/a
Radionuclides (pCi/L) (d)			
Bismuth-214	21*		24,000[4]
Lead-214	20*		8,000[4]
Spring/Surface Water Monitoring Point S-02 - Southern Discharge Area Exit Pathway			
Field measurements			
Conductivity (mS/cm)	0.17	0.32	n/a
Dissolved Oxygen (ppm)	10	8.1	n/a
pH (Std Unit)	7.2	7.0	n/a
Temperature (deg C)	16	20	n/a
Turbidity (NTU)	8.0	2.0	1[2]
Metals (mg/L)			
Aluminum	0.31	1.9	(0.05, 0.2)[3]
Arsenic	0.0021	0.0034	0.01[1]
Barium	0.034	0.059	2[1]

Table 2.1. (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Beryllium	<0.0001	0.00024	0.004[1]
Boron	0.0051	0.019	n/a
Cadmium	<0.00011	0.00014	0.005[1]
Calcium	15	32	n/a
Chromium	<0.0015	0.0028	0.1[1]
Cobalt	0.00037	0.002	n/a
Copper	0.00065	0.0026	1.3[2]
Iron	0.3	2.0	0.3[3]
Lead	0.00086	0.0052	0.005[1]
Lithium	<0.002	0.0022	n/a
Magnesium	9.1	E17	n/a
Manganese	0.038	0.23	0.05[3]
Molybdenum	0.00012	0.00049	n/a
Nickel	0.00078	0.0026	0.1[1]
Phosphorous	<0.02	0.038	n/a
Potassium	0.6	1.0	n/a
Silica		16	n/a
Silicon	4.3	7.6	n/a
Sodium	0.52	0.63	n/a
Strontium	0.01	0.02	n/a
Sulfur	0.36	0.74	n/a
Thallium	<0.0003	0.00067	0.002[1]
Thorium	<0.0002	0.00057	n/a
Titanium	0.005	0.025	n/a
Uranium	<0.00005	0.00041	n/a
Vanadium	<0.003	0.0044	n/a
Zinc	0.0034	0.013	5[3]
Zirconium	<0.0005	0.0014	n/a
Radionuclides (pCi/L) (d)			
Alpha activity	U4.3	6.1*	15[2]
Beta activity	U2.3	5.5*	50[2]

Table 2.1. (continued)

Parameter	Wet Season (b)	Dry Season (b)	Reference value [ref](c)
Volatile organics (ug/L)			
Acetone	U5.0	B13	n/a

(a) Only parameters that are detected are listed in the table. The sampling and analysis plan contains a complete list of analyses performed.

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

(c) If a reference limit exists, the source is coded as:

1 Rules of Tennessee Department of Environment and Conservation, Division of Water Pollution Control, Chapter 1200-4-3, General Water Quality Criteria, Domestic Water Supply, as amended.

2 40 CFR Part 141--National Primary Drinking Water Regulations, Subparts B and G, as amended.

3 40 CFR Part 143--National Secondary Drinking Water Regulations, as amended.

4 DOE Order 5400.5, Chapter III, Derived Concentration Guides for Air and Water.

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

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

Table 2.2. Constituents detected in SNS groundwater, 2009(a)

Parameter	N det/ N total	Min	Max	Avg	Standard error(b)
Spring S-1 - Discharge point east-southeast of SNS site					
Field measurements					
Conductivity (mS/cm)	12/12	0.2	0.41	0.28	0.02
Dissolved Oxygen	12/12	5.8	9.1	7.5	0.27
pH (Std Unit)	12/12	6.0	8.8	n/a	n/a
Temperature (deg C)	12/12	11	23	17	1.3
Turbidity (NTU)	12/12	3.0	41	16	3.6
Radionuclides (pCi/L)[c]					
Alpha activity	1/1	3.0*	3.0*	n/a	n/a
Tritium	4/12	U-20	1,100*	~270*	100
Spring S-2 - Discharge point south of SNS site					
Field measurements					
Conductivity (mS/cm)	12/12	0.29	0.42	0.34	0.012
Dissolved Oxygen	12/12	2.1	7.2	4.2	0.49
pH (Std Unit)	12/12	5.9	8.3	n/a	n/a
Temperature (deg C)	12/12	11	17	15	0.51
Turbidity (NTU)	12/12	0.0	19	6.2	1.7
Radionuclides (pCi/L)[c]					
Beta activity	1/1	5.1*	5.1*	n/a	n/a
Tritium	4/12	U-39	570*	~190*	55
Spring S-3 - Discharge point south of SNS site					
Field measurements					
Conductivity (mS/cm)	12/12	0.16	0.43	0.26	0.026
Dissolved Oxygen	12/12	4.9	6.9	5.8	0.17
pH (Std Unit)	12/12	6.2	8.2	n/a	n/a
Temperature (deg C)	12/12	14	15	14	0.12
Turbidity (NTU)	12/12	1.0	9.0	3.7	0.78

Table 2.2. (continued)

Parameter	N det/ N total	Min	Max	Avg	Standard error(b)
Spring S-4 - Discharge point west-southwest of SNS site					
Field measurements					
Conductivity (mS/cm)	12/12	0.08	0.23	0.15	0.015
Dissolved Oxygen	12/12	6.6	9.5	8.1	0.26
pH (Std Unit)	12/12	6.2	8.3	n/a	n/a
Temperature (deg C)	12/12	10	19	15	0.86
Turbidity (NTU)	12/12	0.0	4.0	1.3	0.43
Radionuclides (pCi/L)[c]					
Carbon-14	1/12	U-13	U14	~-0.16	2.1
Tritium	1/12	U-24	190*	~64*	19
Spring S-5 - Discharge point north-northeast of SNS site					
Field measurements					
Conductivity (mS/cm)	12/12	0.32	0.57	0.47	0.024
Dissolved Oxygen	12/12	3.1	5.7	4.8	0.21
pH (Std Unit)	12/12	6.7	8.0	n/a	n/a
Temperature (deg C)	12/12	13	15	14	0.22
Turbidity (NTU)	12/12	1.0	10	3.0	0.77
Radionuclides (pCi/L)[c]					
Alpha activity	1/1	20*	20*	n/a	n/a
Beta activity	1/1	13*	13*	n/a	n/a
Tritium	2/12	U-54	220*	~92*	25
Spring SP-1 - Discharge point south of SNS site					
Field measurements					
Conductivity (mS/cm)	12/12	0.23	0.36	0.28	0.01
Dissolved Oxygen	12/12	7.0	9.2	8.2	0.17
pH (Std Unit)	12/12	6.2	8.5	n/a	n/a

Table 2.2. (continued)

Parameter	N det/ N total	Min	Max	Avg	Standard error(b)
Temperature (deg C)	12/12	11	19	16	0.82
Turbidity (NTU)	12/12	0.0	18	3.8	1.5
Surface Water Point SW-1 - Discharge point east-southeast of SNS site					
Field measurements					
Conductivity (mS/cm)	12/12	0.23	0.41	0.3	0.016
Dissolved Oxygen	12/12	1.1	8.6	6.1	0.64
pH (Std Unit)	12/12	5.9	8.4	n/a	n/a
Temperature (deg C)	12/12	11	23	16	1.1
Turbidity (NTU)	12/12	0.0	19	6.5	1.6
Radionuclides (pCi/L)[c]					
Alpha activity	1/1	3.5*	3.5*	n/a	n/a
Tritium	2/12	U-120	300*	~88*	34

(a) All values were included in the calculations. Only parameters that have detections in one or more samples are listed in the table. The sampling and analysis plan contains a complete list of analyses performed.
(b) Standard error of the mean.
*(c) Individual and average radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected at or above MDA.*

Table 2.3. 2009 radionuclide concentrations in surface waters around ORNL

Parameter	N det/ N total	Concentration (pCi/L) Min(a)	Max(a)	Avg(b)	Standard error(c)	DCG(d)	Percent of DCG(e)
			White Oak Creek Headwaters				
Alpha activity	1/12	-1.2	4.0*	~0.67	0.39	n/a	n/a
Beta activity	2/12	-0.96	5.4*	~2.4*	0.65	n/a	n/a
Carbon-14	0/12	-11,000	-43	~-2,600	950	70,000	n/a
Cesium-137	2/12	0.1	6.8*	3.5*	0.52	3,000	0.12
Cobalt-60	0/12	-2.6	3.2*	~0.82	0.56	5,000	n/a
Tritium	0/12	-450	160*	~-140	62	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 2.4. 2009 radionuclide concentrations at ORNL NPDES permitted locations

Parameter	N det/ N total	Concentration (pCi/L) Min(a)	Max(a)	Avg(b)	Standard error(c)	DCG(d)	Percent of DCG(e)
Sewage Treatment Plant (X01)							
Alpha activity	3/12	-0.23	14*	~2.8*	1.3	n/a	n/a
Beta activity	12/12	500*	750*	610*	27	n/a	n/a
Carbon-14	0/12	-11,000	340*	~-2,400	970	70,000	n/a
Cesium-137	6/12	2.9*	20*	9.5*	1.8	3,000	0.32
Cobalt-60	0/12	-0.5	3.6*	~1.3*	0.39	5,000	n/a
Potassium-40	1/1	62*	62*	n/a	n/a	7,000	0.89
Strontium-89/90	12/12	200*	340*	270*	12	1,000	27
Tritium	7/12	-190	1,400*	~650*	170	2,000,000	0.032
Coal Yard Runoff Treatment Facility (X02)							
Alpha activity	0/12	-14	17	~-3.7	2.3	n/a	n/a
Beta activity	12/12	300*	640*	460*	24	n/a	n/a
Strontium-89/90	11/12	7.6*	100*	28*	7.3	1,000	2.8
Process Waste Treatment Complex (X12)							
Alpha activity	11/12	15*	110*	37*	8.1	n/a	n/a
Beta activity	12/12	88*	1,300*	450*	100	n/a	n/a
Cesium-137	12/12	33*	1,200*	280*	100	3,000	9.4
Cobalt-60	0/12	0.1	5.1*	2.4*	0.46	5,000	n/a
Ruthenium-106	1/1	320*	320*	n/a	n/a	6,000	5.3
Strontium-89/90	12/12	26*	99*	67*	6.9	1,000	6.7
Tritium	12/12	190,000*	350,000*	270,000*	16,000	2,000,000	13
Uranium-233/234	12/12	19*	100*	40*	7.2	500	8.0
Uranium-235	12/12	0.22*	3.5*	1.2*	0.33	600	0.19
Uranium-236	12/12	0.36*	3.5*	1.3*	0.28	500	0.26
Uranium-238	12/12	0.8*	4.2*	1.9*	0.35	600	0.32

Table 2.4. (continued)

Parameter	N det/ N total	Concentration (pCi/L) Min(a)	Max(a)	Avg(b)	Standard error(c)	DCG(d)	Percent of DCG(e)
			Melton Branch 1 (X13)				
Alpha activity	0/12	-1.1	0.41	~-0.33	0.15	n/a	n/a
Beta activity	12/12	75*	130*	96*	5.6	n/a	n/a
Cesium-137	2/12	-0.6	6.7*	~2.7*	0.59	3,000	0.089
Cobalt-60	0/12	-3.2	5.4*	~0.78	0.72	5,000	n/a
Strontium-89/90	12/12	30*	55*	41*	2.2	1,000	4.1
Tritium	12/12	4,900*	9,900*	7,300*	530	2,000,000	0.37
			White Oak Creek (X14)				
Alpha activity	11/12	2.7*	20*	8.7*	1.3	n/a	n/a
Beta activity	12/12	78*	180*	140*	9.0	n/a	n/a
Cesium-137	12/12	6.9*	63*	21*	4.7	3,000	0.71
Cobalt-60	0/12	-1.7	4.4*	~0.42	0.52	5,000	n/a
Strontium-89/90	12/12	29*	64*	53*	3.0	1,000	5.3
Tritium	12/12	6,500*	32,000*	18,000*	2,400	2,000,000	0.92
			White Oak Dam (X15)				
Alpha activity	9/12	1.9*	11*	5.9*	0.79	n/a	n/a
Beta activity	12/12	120*	200*	160*	5.6	n/a	n/a
Cesium-137	12/12	16*	59*	26*	3.3	3,000	0.88
Cobalt-60	0/12	-5.6	4.4*	~1.2	0.79	5,000	n/a
Potassium-40	1/1	120*	120*	n/a	n/a	7,000	1.7
Strontium-89/90	12/12	39*	78*	61*	3.1	1,000	6.1
Tritium	12/12	6,100*	21,000*	16,000*	1,400	2,000,000	0.78
			Outfall 001				
Alpha activity	0/1	0.29	0.29	n/a	n/a	n/a	n/a
Beta activity	0/1	4.3*	4.3*	n/a	n/a	n/a	n/a
			Outfall 080				
Alpha activity	2/2	26*	31*	29*	2.5	n/a	n/a
Americium-241	2/2	0.93*	1.1*	1.0*	0.085	30	3.4

Table 2.4. (continued)

Parameter	N det/ N total	Concentration (pCi/L) Min(a)	Max(a)	Avg(b)	Standard error(c)	DCG(d)	Percent of DCG(e)
Beta activity	2/2	210*	360*	290	75	n/a	n/a
Cesium-137	2/2	9.3*	9.7*	9.5*	0.2	3,000	0.32
Cobalt-60	0/2	-1.4	6.0*	~2.3	3.7	5,000	n/a
Curium-243/244	2/2	24*	25*	25*	0.5	50	49
Strontium-89/90	2/2	96*	160*	130	32	1,000	13
Tritium	2/2	1,200*	1,500*	1,400*	150	2,000,000	0.068
Outfall 081							
Alpha activity	0/1	0.069	0.069	n/a	n/a	n/a	n/a
Beta activity	1/1	19*	19*	n/a	n/a	n/a	n/a
Outfall 085							
Alpha activity	4/4	4.4*	8.4*	6.3*	1.0	n/a	n/a
Beta activity	4/4	170*	320*	220*	35	n/a	n/a
Cesium-137	0/4	-0.5	3.5*	~2.1	0.93	3,000	n/a
Cobalt-60	0/4	-5.6	1.4	~-1.1	1.6	5,000	n/a
Strontium-89/90	4/4	80*	150*	110*	15	1,000	11
Tritium	1/4	-54	380*	~140	94	2,000,000	0.0071
Uranium-233/234	4/4	1.1*	7.2*	4.6*	1.3	500	0.93
Uranium-235	3/4	0.12*	0.52*	0.24*	0.095	600	0.04
Uranium-236	3/4	0.11*	0.54*	0.36*	0.099	500	0.073
Uranium-238	4/4	0.34*	1.4*	0.96*	0.22	600	0.16
Outfall 204							
Alpha activity	1/2	1.3	6.3*	3.8	2.5	n/a	n/a
Beta activity	2/2	65*	170*	120	53	n/a	n/a
Cesium-137	2/2	26*	39*	33	6.5	3,000	1.1
Cobalt-60	0/2	0.4	1.8	1.1	0.7	5,000	n/a
Strontium-89/90	2/2	27*	67*	47	20	1,000	4.7

Table 2.4. (continued)

Parameter	N det/ N total	Concentration (pCi/L) Min(a)	Max(a)	Avg(b)	Standard error(c)	DCG(d)	Percent of DCG(e)
			Outfall 207				
Alpha activity	4/4	3.6*	11*	6.9*	1.8	n/a	n/a
Beta activity	4/4	52*	90*	73*	7.9	n/a	n/a
Cesium-137	0/4	1.0	5.0*	3.3*	0.84	3,000	n/a
Cobalt-60	0/4	0.1	4.8*	1.8	1.0	5,000	n/a
Strontium-89/90	4/4	22*	50*	36*	5.7	1,000	3.6
			Outfall 211				
Alpha activity	0/1	-0.62	-0.62	n/a	n/a	n/a	n/a
Beta activity	0/1	4.6*	4.6*	n/a	n/a	n/a	n/a
			Outfall 217				
Alpha activity	0/1	-0.46	-0.46	n/a	n/a	n/a	n/a
Beta activity	0/1	-0.25	-0.25	n/a	n/a	n/a	n/a
			Outfall 219				
Alpha activity	0/1	0.28	0.28	n/a	n/a	n/a	n/a
Beta activity	0/1	3.0*	3.0*	n/a	n/a	n/a	n/a
			Outfall 234				
Alpha activity	0/1	0.78	0.78	n/a	n/a	n/a	n/a
Beta activity	0/1	2.2	2.2	n/a	n/a	n/a	n/a
			Outfall 241				
Alpha activity	3/3	9.5*	110*	73	32	n/a	n/a
Americium-241	0/1	0.16	0.16	n/a	n/a	30	n/a
Beta activity	3/3	65*	680*	420	180	n/a	n/a
Cesium-137	0/3	-0.4	1.6	~0.9	0.65	3,000	n/a
Cobalt-60	0/3	0.2	1.9	1.1	0.49	5,000	n/a
Curium-243/244	0/1	0.31*	0.31*	n/a	n/a	50	n/a
Plutonium-238	0/1	0.13	0.13	n/a	n/a	40	n/a

Table 2.4. (continued)

Parameter	N det/ N total	Concentration (pCi/L) Min(a)	Max(a)	Avg(b)	Standard error(c)	DCG(d)	Percent of DCG(e)
Plutonium-239/240	0/1	0.1*	0.1*	n/a	n/a	30	n/a
Strontium-89/90	3/3	32*	350*	220	97	1,000	22
Tritium	0/3	-210	140	~-67	110	2,000,000	n/a
Uranium-233/234	3/3	12*	68*	49	19	500	9.9
Uranium-235	3/3	0.2*	3.5*	1.4	1.1	600	0.23
Uranium-236	3/3	0.2*	0.56*	0.4*	0.11	500	0.081
Uranium-238	3/3	0.49*	3.5*	2.5	0.99	600	0.41
Outfall 265							
Alpha activity	0/1	1.1	1.1	n/a	n/a	n/a	n/a
Beta activity	1/1	43*	43*	n/a	n/a	n/a	n/a
Outfall 281							
Alpha activity	0/4	-0.92	1.9	~0.87	0.62	n/a	n/a
Beta activity	3/4	5.2*	25*	17*	4.7	n/a	n/a
Tritium	4/4	1,100*	11,000*	3,600	2,500	2,000,000	0.18
Outfall 282							
Alpha activity	0/4	-1.1	0.41	~-0.46	0.32	n/a	n/a
Beta activity	4/4	5.7*	22*	14*	3.4	n/a	n/a
Outfall 302							
Alpha activity	9/12	1.6	12*	6.1*	0.95	n/a	n/a
Beta activity	12/12	54*	4,000*	1,300*	440	n/a	n/a
Cesium-137	12/12	11*	93*	36*	7.2	3,000	1.2
Cobalt-60	0/11	-1.3	3.1*	~1.4*	0.44	5,000	n/a
Strontium-89/90	12/12	23*	1,800*	610*	200	1,000	61
Tritium	12/12	1,700*	150,000*	29,000*	12,000	2,000,000	1.5
Uranium-233/234	3/3	14*	19*	16*	1.7	500	3.1
Uranium-235	3/3	0.12*	1.0*	0.45	0.28	600	0.076

Table 2.4. (continued)

Parameter	N det/ N total	Concentration (pCi/L) Min(a)	Max(a)	Av(b)	Standard error(c)	DCG(d)	Percent of DCG(e)
Uranium-236	3/3	0.099*	1.0*	0.44	0.28	500	0.089
Uranium-238	3/3	0.73*	1.3*	0.94*	0.18	600	0.16
Outfall 304							
Alpha activity	11/12	3.4*	37*	16*	3.1	n/a	n/a
Americium-241	4/4	0.89*	4.6*	3.3*	0.82	30	11
Beta activity	12/12	150*	3,000*	1,100*	240	n/a	n/a
Cesium-137	12/12	16*	410*	87*	34	3,000	2.9
Cobalt-60	0/12	-3.9	4.1*	~0.95	0.58	5,000	n/a
Curium-243/244	4/4	2.5*	14*	10*	2.7	50	21
Plutonium-238	0/4	0.0088	0.18*	0.084	0.037	40	n/a
Plutonium-239/240	4/4	0.36*	5.7*	2.3	1.2	30	7.8
Strontium-89/90	12/12	120*	1,200*	490*	96	1,000	49
Thorium-228	0/1	-0.093	-0.093	n/a	n/a	400	n/a
Thorium-230	1/1	0.24*	0.24*	n/a	n/a	300	0.08
Thorium-232	0/1	0.037	0.037	n/a	n/a	50	n/a
Tritium	4/12	-570	9,400*	~970	780	2,000,000	0.048
Uranium-233/234	6/6	2.5*	15*	7.3*	2.0	500	1.5
Uranium-235	3/6	0.046	1.1*	0.3	0.16	600	0.05
Uranium-236	5/6	0.018	1.4*	0.4	0.21	500	0.08
Uranium-238	5/6	0.027	4.2*	1.7*	0.73	600	0.28
Outfall 365							
Alpha activity	0/2	-0.2	2.9*	~1.4	1.6	n/a	n/a
Beta activity	2/2	14*	15*	15*	0.5	n/a	n/a
Outfall 368							
Alpha activity	0/1	-0.14	-0.14	n/a	n/a	n/a	n/a
Beta activity	1/1	27*	27*	n/a	n/a	n/a	n/a

Table 2.4. (continued)

Parameter	N det/ N total	Concentration (pCi/L) Min(a)	Max(a)	Av(b)	Standard error(c)	DCG(d)	Percent of DCG(e)
Outfall 383 - Down-gradient NPDES outfall south of Building 7900							
Alpha activity	0/1	-0.21	-0.21	n/a	n/a	n/a	n/a
Beta activity	0/1	4.4*	4.4*	n/a	n/a	n/a	n/a
Tritium	1/1	6,200*	6,200*	n/a	n/a	2,000,000	0.31

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

Table 2.5. 2009 analyses for ORNL reference surface waters

Parameter	N det/ N total	Concentration Min(a)	Max(a)	Avg(b)	Standard error(c)	Reference value(d)
White Oak Creek Headwaters						
Metals						
Antimony (mg/L)	1/12	<0.00081	0.0012	~0.0008	0.00003	n/a
Arsenic (mg/L)	2/12	<0.001	0.0012	~0.001	0.000015	0.34
Cadmium (mg/L)	1/12	<0.00078	0.0014	~0.0008	0.000049	0.002
Chromium (mg/L)	4/12	<0.001	0.0019	~0.0012	0.000087	n/a
Copper (mg/L)	8/12	<0.001	0.0092	~0.0029	0.00074	0.013
Iron (mg/L)	12/12	0.093	1.0	0.42	0.097	n/a
Lead (mg/L)	6/12	<0.001	0.015	~0.0026	0.0011	0.065
Mercury (mg/L)(e)	2/4	<0.00015	0.00035	~0.0002	0.000046	0.0014
Nickel (mg/L)	4/12	<0.0014	0.0071	~0.0022	0.0005	0.47
Selenium (mg/L)	0/12	<0.041	<0.041	~0.041	0.00000000027	0.02
Silver (mg/L)	1/12	<0.00062	0.00093	~0.0006	0.000026	0.0032
Zinc (mg/L)	7/12	<0.02	0.074	~0.03	0.005	0.12
Physical and field measurements						
Conductivity (mS/cm)	52/52	0.1	0.31	0.23	0.0057	n/a
Dissolved Oxygen (mg/L)	52/52	6.9	11	9.1	0.11	5
pH (Std Unit)	52/52	7.1	8.1	n/a	n/a	n/a
Temperature (deg C)	52/52	6.1	18	14	0.42	n/a

(a) "<" 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.
(d) Tennessee General Water Quality Criteria for Fish and Aquatic Life is used as a reference value for White Oak Creek headwaters.
(e) Sampled quarterly.

Table 2.6. NPDES Permit Number TN0002941, 2009, ORNL Instream Chlorine Monitoring

Parameter	N det/ N total	Concentration Min(a)	Max(a)	Avg(b)	Standard error(c)
First Creek					
Field measurements					
pH (Std Unit)	48/48	7.5	8.1	n/a	n/a
Temperature (deg C)	48/48	8.4	20	15	0.52
Total Residual Oxidant	0/48	<0.05	<0.05	~0.05	0.0
Fifth Creek					
Field measurements					
pH (Std Unit)	72/72	7.6	8.1	n/a	n/a
Temperature (deg C)	72/72	8.4	22	15	0.4
Total Residual Oxidant	1/72	<0.05	0.12	~0.051	0.00097
Melton Branch					
Field measurements					
pH (Std Unit)	24/24	7.6	8.1	n/a	n/a
Temperature (deg C)	24/24	6.4	23	15	1.1
Total Residual Oxidant	0/24	<0.05	<0.05	~0.05	0.0
White Oak Creek					
Field measurements					
pH (Std Unit)	144/144	7.5	8.1	n/a	n/a
Temperature (deg C)	144/144	6.8	23	16	0.38
Total Residual Oxidant	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 2.7. Surface water analyses (2009) at ORNL Environmental Monitoring Plan surface water locations (a)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
First Creek just upstream of Northwest Tributary (1STCK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	6.7	9.3	8.0	1.3	n/a
pH (Std Unit)	2/2	7.0	7.4	n/a	n/a	n/a
Temperature (deg C)	2/2	11	17	14	3.2	n/a
Radionuclides (pCi/L)(f)						
Alpha activity	2/2	130*	130*	130*	1.0	n/a
Beta activity	2/2	550*	770*	660	110	n/a
Strontium-89/90	2/2	250*	350*	300	50	40
Thorium-228	2/2	0.7*	1.2*	0.97	0.27	16
Thorium-230	1/2	0.0	0.38*	0.19	0.19	12
Tritium	1/2	U35	280*	~160	120	80,000
Uranium-233/234	2/2	48*	86*	67	19	20
Uranium-235/236	2/2	1.8*	3.2*	2.5	0.71	n/a
Uranium-238	2/2	2.4*	4.3*	3.4	0.94	24
Fifth Creek just upstream of White Oak Creek at ORNL (FIFTHCK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	8.6	9.3	9.0	0.35	n/a
pH (Std Unit)	2/2	7.5	7.6	n/a	n/a	n/a
Temperature (deg C)	2/2	13	17	15	2.4	n/a
Radionuclides (pCi/L)(f)						
Beta activity	2/2	39*	59*	49	10	n/a
Strontium-89/90	2/2	17*	24*	21	3.7	40
Tritium	1/2	U69	260*	~160	95	80,000
Grassy Creek upstream of SEG and IT Corp. (GCK 3.6)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	8.1	9.6	8.9	0.75	n/a

Table 2.7. (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
pH (Std Unit)	2/2	6.9	7.6	n/a	n/a	n/a
Temperature (deg C)	2/2	9.6	17	13	3.6	n/a
Metals (mg/L)						
Aluminum	2/2	0.72	5.7	3.2	2.5	n/a
Arsenic	1/2	<0.0015	0.0023	~0.0019	0.00042	n/a
Barium	2/2	0.059	0.088	0.073	0.015	n/a
Beryllium	2/2	0.00015	0.00017	0.00016	0.00001	n/a
Boron	2/2	0.01	0.015	0.013	0.0021	n/a
Calcium	2/2	20	33	27	6.9	n/a
Chromium	1/2	<0.0015	0.0072	~0.0044	0.0029	n/a
Cobalt	2/2	0.0026	0.0041	0.0034	0.00073	n/a
Copper	2/2	0.0022	0.0044	0.0033	0.0011	n/a
Iron	2/2	0.81	5.0	2.9	2.1	n/a
Lead	2/2	0.0054	0.0063	0.0059	0.00045	n/a
Lithium	1/2	<0.002	0.0058	~0.0039	0.0019	n/a
Magnesium	2/2	5.6	11	8.1	2.5	n/a
Manganese	2/2	0.3	E0.39	~0.35	0.045	n/a
Molybdenum	1/2	<0.0001	0.00024	~0.00017	0.000068	n/a
Nickel	2/2	0.0021	0.0061	0.0041	0.002	n/a
Phosphorous	1/2	<0.02	0.075	~0.048	0.028	n/a
Potassium	2/2	1.2	2.7	1.9	0.77	n/a
Sodium	2/2	2.0	2.4	2.2	0.18	n/a
Strontium	2/2	0.039	0.06	0.049	0.01	n/a
Sulfur	2/2	1.8	2.3	2.0	0.27	n/a
Titanium	2/2	0.0072	0.064	0.036	0.029	n/a
Uranium	1/2	<0.00005	0.00039	~0.00022	0.00017	n/a
Vanadium	2/2	0.0063	0.0099	0.0081	0.0018	n/a
Zinc	2/2	0.011	0.02	0.016	0.0046	n/a
Zirconium	1/2	<0.0005	0.0022	~0.0014	0.00087	n/a

Table 2.7. (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Radionuclides (pCi/L)(f)						
Alpha activity	1/2	U0.77*	9.9*	~5.3	4.6	n/a
Beta activity	1/2	U2.0*	12*	~7.0	5.1	n/a
Potassium-40	1/2	U-12	47*	~17	29	280
Ish Creek prior to entering CRK 30.8 (ICK 0.7)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	8.8	10	9.4	0.6	n/a
pH (Std Unit)	2/2	7.0	7.8	n/a	n/a	n/a
Temperature (deg C)	2/2	9.0	16	13	3.7	n/a
McCoy Branch prior to entering CRK 60.3 (McCBK 1.8)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	7.2	9.0	8.1	0.9	n/a
pH (Std Unit)	2/2	7.5	7.5	n/a	n/a	n/a
Temperature (deg C)	2/2	9.5	20	15	5.5	n/a
Radionuclides (pCi/L)(f)						
Beta activity	1/2	U0.47	3.0*	~1.8	1.3	n/a
Melton Branch downstream from ORNL (MEK 0.2)						
Field measurements						
Dissolved Oxygen (ppm)	6/6	6.4	9.9	8.2	0.55	5
pH (Std Unit)	6/6	6.7	7.9	n/a	n/a	n/a
Temperature (deg C)	6/6	11	22	17	1.6	n/a
Radionuclides (pCi/L)(f)						
Alpha activity	1/6	U0.36	10*	~2.7	1.5	n/a
Beta activity	6/6	62*	520*	170*	73	n/a
Strontium-89/90	6/6	25*	260*	83*	37	40
Tritium	6/6	480*	17,000*	9,300*	2,500	80,000

Table 2.7. (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Northwest Tributary prior to entering 1st Creek at ORNL (NWTK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	7.7	9.5	8.6	0.9	n/a
pH (Std Unit)	2/2	7.3	7.7	n/a	n/a	n/a
Temperature (deg C)	2/2	9.8	16	13	3.3	n/a
Radionuclides (pCi/L)(f)						
Beta activity	2/2	110*	200*	160	42	n/a
Strontium-89/90	2/2	52*	84*	68	16	40
Tritium	1/2	U150*	220*	~190	36	80,000
Raccoon Creek sampling station prior to entering CRK 31 (RCK 2.0) (g)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	5.6	7.2	6.4	0.8	n/a
pH (Std Unit)	2/2	6.1	7.1	n/a	n/a	n/a
Temperature (deg C)	2/2	11	16	13	2.8	n/a
Radionuclides (pCi/L)(f)						
Alpha activity	1/2	U0.68	2.5*	~1.6	0.89	n/a
Beta activity	2/2	12*	15*	13*	1.3	n/a
Bismuth-214	2/2	12*	24*	18	6.2	24,000
Strontium-89/90	2/2	4.8*	4.9*	4.9*	0.07	40
Tritium	1/2	U90	180*	~140	46	80,000
Walker Branch prior to entering CRK 53.4 (WBK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	7.4	9.7	8.6	1.2	n/a
pH (Std Unit)	2/2	7.2	7.5	n/a	n/a	n/a
Temperature (deg C)	2/2	9.8	17	13	3.4	n/a
Radionuclides (pCi/L)(f)						
Bismuth-214	1/2	0.0	29*	15	15	24,000

Table 2.7. (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
White Oak Lake at White Oak Dam (WCK 1.0)						
Field measurements						
Dissolved Oxygen (ppm)	12/12	3.4	12	7.8	0.61	5
pH (Std Unit)	12/12	6.1	8.1	n/a	n/a	n/a
Temperature (deg C)	12/12	10	27	17	1.8	n/a
Metals (mg/L)						
Aluminum	12/12	0.36	3.8	1.1	0.28	n/a
Antimony	1/12	<0.0005	0.0012	~0.00081	0.00008	n/a
Arsenic	4/12	<0.0015	0.0049	~0.0022	0.00036	0.34
Barium	12/12	0.029	0.055	0.048	0.002	n/a
Beryllium	3/12	<0.0001	0.00019	~0.00011	0.0000076	n/a
Boron	12/12	0.015	0.03	0.023	0.0013	n/a
Calcium	12/12	14	54	42	3.6	n/a
Chromium	11/12	<0.0015	0.0074	~0.0045	0.00061	n/a
Cobalt	12/12	0.00042	0.0024	0.00075	0.00016	n/a
Copper	12/12	0.0021	0.0046	0.0033	0.00025	0.013
Iron	12/12	0.72	4.9	1.5	0.33	n/a
Lead	12/12	0.00088	0.0044	0.0016	0.00028	0.065
Lithium	11/12	<0.002	0.005	~0.0031	0.0002	n/a
Magnesium	12/12	E3.3	13	~9.2	0.89	n/a
Manganese	12/12	0.072	E0.18	~0.14	0.01	n/a
Mercury	2/12	<0.000066	<0.00067	~0.00018	0.000066	0.0014
Molybdenum	12/12	0.001	0.061	0.032	0.0058	n/a
Nickel	12/12	0.0014	0.0047	0.002	0.00026	0.47
Phosphorous	12/12	0.059	0.4	0.24	0.029	n/a
Potassium	12/12	1.8	6.3	3.2	0.4	n/a
Silver	3/12	<0.0002	0.00037	~0.00023	0.000016	0.0032
Sodium	12/12	0.93	36	18	2.8	n/a
Strontium	12/12	0.032	0.15	0.11	0.011	n/a

Table 2.7. (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Sulfur	12/12	2.3	31	18	2.7	n/a
Thallium	9/12	<0.0003	0.00062	~0.00042	0.000032	n/a
Titanium	12/12	0.0058	0.044	0.014	0.003	n/a
Uranium	12/12	0.00036	0.0022	0.0014	0.00017	n/a
Vanadium	6/12	<0.003	0.036	~0.0073	0.0027	n/a
Zinc	12/12	0.0081	0.027	0.016	0.0018	0.12
Zirconium	12/12	0.00054	0.003	0.0014	0.00023	n/a
Radionuclides (pCi/L)(f)						
Alpha activity	12/12	3.8*	33*	12*	2.2	n/a
Beta activity	12/12	150*	540*	220*	33	n/a
Bismuth-214	1/12	0.0	11*	0.94	0.94	24,000
Cesium-137	12/12	5.0*	420*	70*	33	120
Potassium-40	2/12	U-24	38*	~3.1	5.5	280
Strontium-89/90	12/12	25*	92*	71*	4.9	40
Thorium-230	2/12	0.0	0.34*	0.052	0.035	12
Tritium	12/12	560*	41,000*	21,000*	3,900	80,000
Uranium-233/234	3/12	0.0	5.2*	1.1*	0.59	20
Uranium-238	1/12	0.0	0.89*	0.074	0.074	24
Volatile organics (ug/L)						
Chloroform	9/12	J0.39	U1.0	~0.68	0.068	n/a
White Oak Creek downstream from ORNL (WCK 2.6)						
Field measurements						
Dissolved Oxygen (ppm)	6/6	7.1	9.8	8.7	0.45	5
pH (Std Unit)	6/6	6.6	8.0	n/a	n/a	n/a
Temperature (deg C)	6/6	11	22	17	1.6	n/a
Radionuclides (pCi/L)(f)						
Alpha activity	6/6	4.2*	10*	6.9*	0.8	n/a
Beta activity	6/6	84*	190*	140*	13	n/a

Table 2.7. (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Cesium-137	6/6	6.4*	130*	42*	19	120
Strontium-89/90	6/6	35*	83*	61*	7.0	40
Tritium	6/6	1,100*	43,000*	17,000*	5,700	80,000
White Oak Creek upstream from ORNL (WCK 6.8)						
Field measurements						
Dissolved Oxygen (ppm)	4/4	8.7	9.8	9.1	0.25	5
pH (Std Unit)	4/4	7.6	7.9	n/a	n/a	n/a
Temperature (deg C)	4/4	15	17	16	0.51	n/a
Radionuclides (pCi/L)(f)						
Beta activity	1/4	U0.2	3.5*	~1.8*	0.67	n/a
Bismuth-214	2/4	0.0	23*	7.8	5.4	24,000
Strontium-89/90	1/4	U-0.22	U0.96*	~0.44	0.3	40
Tritium	1/4	U57	210*	~130*	38	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 "U" indicates that the value was undetected at the analytical detection limit or MDA; "E" indicates that the percent difference between the parent sample and its serial dilution's concentration exceeds 10%; and "<" indicates the value for a parameter was not quantifiable at the analytical detection limit.
(c) A tilde (~) indicates that estimated values and/or detection limits were used in the calculation.
(d) Standard error of the mean.
(e) Tennessee General Water Quality Criteria for Freshwater Fish and Aquatic Life, as amended (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.*

Table 2.8. Results From Ambient and Effluent Hg Monitoring Tasks, 2009

Media	Location	Date	Hg Total ng/L	Field Blank Hg, Total ng/L	Hg Dissolved ng/L	MeHg Total ng/L	Field Blank MeHg, Total ng/L	MeHg Dissolved ng/L	TSS mg/L	TDS mg/L	TRO mg/L
Results From Ambient and Effluent Hg Monitoring Tasks, Spring 2009											
Surface Water	5THCR above 367	4/28/2009	2.69	< 0.5	1.49	< 0.05		< 0.05	5	TDS is not measured at surface water locations for the Hg monitoring task.	TRO is not measured at surface water locations for the Hg monitoring task.
Surface Water	5THCR at WOC	4/28/2009	11.6	< 0.5	7.9	< 0.05		< 0.05	6		
Surface Water	5THCR at WOC	5/12/2009	10.1	1.74	2.47	0.063	< 0.05	0.052	2		
Surface Water	5THCR below 161	4/28/2009	12.1	< 0.5	8.19	< 0.05		< 0.05	6		
Surface Water	FCK 0.1	5/12/2009	3.51	0.59	1.14	0.061	< 0.05	< 0.05	< 2		
Surface Water	MEK 0.6	5/12/2009	3.62	0.82	1.44	0.077	< 0.05	< 0.05	2		
Surface Water	NWTK 0.1	5/12/2009	3.51	0.5	0.91	0.051	< 0.05	< 0.05	< 2		
Surface Water	WCK 1.5	5/12/2009	72	0.78	1.96	0.19	< 0.05	< 0.05	24		
Surface Water	WCK 2.3	5/12/2009	14.2	1.41	4.6	0.189	< 0.05	< 0.05	< 2		
Surface Water	WCK 2.9	5/12/2009	16	0.55	6.96	0.073	< 0.05	< 0.05	4		
Surface Water	WCK 3.4	5/12/2009	17.8	< 0.5	6.14	0.141	< 0.05	< 0.05	< 2		
Surface Water	WCK 4.1	5/12/2009	15.5	0.62	6.23	0.052	< 0.05	< 0.05	< 2		
Surface Water	WCK 6.8	5/12/2009	3.15	1.17	1.53	0.057	< 0.05	0.063	< 2		
Surface Water	WOC at 3rdSt Br	5/12/2009	26.3	1.9	6.86	0.055	< 0.05	< 0.05	4		
Surface Water	WOC dstrm5THCR	4/28/2009	12.3	< 0.5	4.75	< 0.05		< 0.05	5		
Surface Water	WOC dstrm5THCR	5/12/2009	10.2	< 0.5	3.28	0.059	< 0.05	< 0.05	< 2		
Surface Water	WOC ustrm 211	5/12/2009	2.82	< 0.5	2.09	0.056	< 0.05	< 0.05	2		
Surface Water	WOC ustrm5THCR	4/28/2009	12.2	< 0.5	4.9	< 0.05		< 0.05	6		
Surface Water	WOC ustrm5THCR	5/12/2009	9.63	0.52	4.39	0.051	< 0.05	0.052	7		
Effluent	106	5/12/2009	2.15	1.23	0.94	< 0.05		< 0.05	< 2	< 4	< 0.05
Effluent	207	5/12/2009	77.3	0.69	27.6	0.234	< 0.05	0.158	21	107	< 0.05

Table 2.8. Results From Ambient and Effluent Hg Monitoring Tasks, Spring 2009 (continued)

Media	Location	Date	Hg Total ng/L	Field Blank Hg, Total ng/L	Hg Dissolved ng/L	MeHg Total ng/L	Field Blank MeHg, Total ng/L	MeHg Dissolved ng/L	TSS mg/L	TDS mg/L	TRO mg/L
Effluent	211	5/12/2009	123	0.64	111	0.076	< 0.05	0.092	< 2	187	< 0.05
Effluent	302	5/12/2009	4.22	1.04	3.83	0.106	< 0.05	0.065	< 2	321	< 0.05
Effluent	304	5/12/2009	37.7	< 0.5	16.4	0.101	< 0.05	0.089	< 2	192	< 0.05
Effluent	363	4/28/2009	41.8	< 0.5	28.2	< 0.05		< 0.05	5	317	0.85
Effluent	367	4/28/2009	5.72	< 0.5	2.28	0.064	< 0.05	0.092	4	172	< 0.05

Media	Location	Date	Flow gpm	Cond. mS/cm	D.O. mg/L	Temp. degC	Turb. NTU	pH StdUnit	Flux Hg,Total mg/day	Flux Hg, Dis mg/day	Flux MeHg,Total mg/day	Flux MeHg, Dis mg/day
Surface Water	5THCR above 367	4/28/2009	690	0.292	9	15.9	4	8.1	10.1	5.6	< 0.188	< 0.188
Surface Water	5THCR at WOC	4/28/2009	560	0.294	8.9	16.1	5	8.2	35.4	24.1	< 0.153	< 0.153
Surface Water	5THCR at WOC	5/12/2009	980	0.256	9.2	15.4	2	7.9	53.9	13.2	0.337	0.278
Surface Water	5THCR below 161	4/28/2009	630	0.297	9.5	16.1	6	8.2	41.5	28.1	< 0.172	< 0.172
Surface Water	FCK 0.1	5/12/2009	530	0.266	8.8	14.3	8	7.9	10.1	3.29	0.176	< 0.144
Surface Water	MEK 0.6	5/12/2009	720	0.242	9.2	14.7	9	7.8	14.2	5.65	0.302	< 0.196
Surface Water	NWTK 0.1	5/12/2009	363	0.34	8.2	13.4	17	7.9	6.94	1.8	0.101	< 0.099
Surface Water	WCK 1.5	5/12/2009	6303	0.25	7.3	17.2	15	8.1	2470	67.3	6.53	< 1.72
Surface Water	WCK 2.3	5/12/2009	5250	0.275	8.5	15.2	6	7.8	406	132	5.41	< 1.43
Surface Water	WCK 2.9	5/12/2009	4140	0.295	8.9	14.9	14	7.7	361	157	1.65	< 1.13
Surface Water	WCK 3.4	5/12/2009	4953	0.349	8	15.6	6	7.7	481	166	3.81	< 1.35
Surface Water	WCK 4.1	5/12/2009	2840	0.293	9.2	15.5	10	7.9	240	96.4	0.805	< 0.774
Surface Water	WCK 6.8	5/12/2009	717	0.116	9.9	14.4	9	7.6	12.3	5.98	0.223	0.246
Surface Water	WOC at 3rdSt Br	5/12/2009	2620	0.349	9	15.5	6	7.8	376	98	0.785	< 0.714

Table 2.8. Results From Ambient and Effluent Hg Monitoring Tasks, Spring 2009 (continued)

Media	Location	Date	Flow gpm	Cond. mS/cm	D.O. mg/L	Temp. degC	Turb. NTU	pH StdUnit	Flux Hg,Total mg/day	Flux Hg, Dis mg/day	Flux MeHg,Total mg/day	Flux MeHg, Dis mg/day
Surface Water	WOC dstrm5THCR	4/28/2009	1430	0.337	8.9	17.3	5	8	95.9	37	< 0.39	< 0.39
Surface Water	WOC dstrm5THCR	5/12/2009	2630	0.272	9.2	15.5	9	7.9	146	47	0.846	< 0.717
Surface Water	WOC ustrm 211	5/12/2009	1530	0.329	9.8	15.8	6	8	23.5	17.4	0.467	< 0.417
Surface Water	WOC ustrm5THCR	4/28/2009	1050	0.368	8.1	18.6	4	8	69.8	28	< 0.286	< 0.286
Surface Water	WOC ustrm5THCR	5/12/2009	1870	0.307	9	16.9	8	7.8	98.2	44.7	0.52	0.53
Effluent	106	5/12/2009	0.5	0.327	8.5	18.8	2	8	0.00586	0.00256	< 0.000136	< 0.000136
Effluent	207	5/12/2009	2	0.327	6.8	16.3	4	7.8	0.843	0.301	0.00255	0.00172
Effluent	211	5/12/2009	100	0.275	9	18.1	1	7.8	67	60.5	0.0414	0.0501
Effluent	302	5/12/2009	0.25	0.204	8.7	16	4	7.8	0.00575	0.005	0.000144	0.0000886
Effluent	304	5/12/2009	15	0.251	8.2	15.4	8	7.7	3.08	1.34	0.00826	0.00728
Effluent	363	4/28/2009	45	0.491	7.1	18.8	12	8.1	10.3	6.92	< 0.0123	< 0.0123
Effluent	367	4/28/2009	0.1	0.264	8.3	16.2	17	8.2	0.00312	0.00124	0.0000349	0.0000501

Results From Ambient and Effluent Hg Monitoring Tasks, Fall 2009

Media	Location	Date	Hg Total ng/L	Field Blank Hg, Total ng/L	Hg Dissolved ng/L	MeHg Total ng/L	Field Blank MeHg, Total ng/L	MeHg Dissolved ng/L	TSS mg/L	TDS mg/L	TRO mg/L
Effluent	106	11/16/2009	4.2	< 5	0.81	< 0.05		< 0.05	< 2	183.2	< 0.05
Effluent	207	11/16/2009	57.3	1.57	5.78	0.184	< 0.05	0.642	3	168	< 0.05
Effluent	211	11/16/2009	350	0.73	320	0.222	< 0.05	0.199	< 2	190.4	< 0.05
Effluent	235	11/16/2009	3.85	< 0.5	2.92	< 0.05		< 0.05	< 2	144.8	1.2
Effluent	264	11/3/2009	7.37	< 0.5	2.6	0.05	0.068	< 0.05	162	3	< 0.05
Effluent	302	11/16/2009	28.3	< 0.5	8.76	< 0.05		< 0.05	< 2	125.6	< 0.05
Effluent	304	11/16/2009	9.29	< 0.5	5.27	0.43	< 0.05	0.28	< 2	193.6	< 0.05
Effluent	363	11/3/2009	13	< 0.5	9.14	0.074	< 0.05	< 0.05	7	532	0.1

Table 2.8. Results From Ambient and Effluent Hg Monitoring Tasks, Fall 2009 (continued)

Media	Location	Date	Hg Total ng/L	Field Blank Hg, Total ng/L	Hg Dissolved ng/L	MeHg Total ng/L	Field Blank MeHg, Total ng/L	MeHg Dissolved ng/L	TSS mg/L	TDS mg/L	TRO mg/L
Effluent	367	11/3/2009	48.2	< 0.5	1.24	< 0.05		< 0.05	2	137	< 0.05
Effluent	X02	11/16/2009	44.5	< 0.5	10.5	0.197	< 0.05	< 0.05	< 2	1458	< 0.05
Effluent	X12	11/16/2009	29.4	< 0.5							
Surface Water	5THCR above 367	11/3/2009	3.43	< 0.5	1.68	< 0.05		< 0.05	3	TDS is not measured at surface water locations for the Hg monitoring task.	TRO is not measured at surface water locations for the Hg monitoring task.
Surface Water	5THCR at WOC	11/3/2009	9.82	< 0.5	2.63	< 0.05		< 0.05	< 2		
Surface Water	5THCR at WOC	11/16/2009	19.9	< 0.5	3.86	0.062	< 0.05	< 0.05	< 2		
Surface Water	5THCR below 161	11/3/2009	67.8	< 0.5	7.13	< 0.05		< 0.05	< 2		
Surface Water	FCK 0.1	11/16/2009	3.72	< 0.5	0.63	< 0.05		< 0.05	< 2		
Surface Water	MEK 0.6	11/16/2009	2.27	< 0.5	1.16	< 0.05		< 0.05	< 2		
Surface Water	NWT 0.1	11/16/2009	1.17	< 0.5	0.56	< 0.05		< 0.05	< 2		
Surface Water	WCK 1.5	11/16/2009	25.7	< 0.5	1.52	0.083	< 0.05	< 0.05	< 2		
Surface Water	WCK 2.3	11/16/2009	7.09	< 0.5	1.65	0.054	< 0.05	< 0.05	< 2		
Surface Water	WCK 2.9	11/16/2009	17.6	< 0.5	2.71	0.071	< 0.05	< 0.05	< 2		
Surface Water	WCK 3.4	11/16/2009	7.93	< 0.5	2.2	0.074	< 0.05	0.062	< 2		
Surface Water	WCK 4.1	11/16/2009	16.5	< 0.5	5.49	0.059	< 0.05	0.055	< 2		
Surface Water	WCK 6.8	11/16/2009	1.79	< 0.5	0.77	< 0.05		< 0.05	< 2		
Surface Water	WOC at 3rdSt Br	11/16/2009	25.6	< 0.5	7.99	0.207	< 0.05	< 0.05	< 2		
Surface Water	WOC dstrm5THCR	11/3/2009	17	< 0.5	5.28	< 0.05		< 0.05	< 2		
Surface Water	WOC dstrm5THCR	11/16/2009	15.6	< 0.5	4.93	0.055	< 0.05	< 0.05	< 2		
Surface Water	WOC ustrm 211	11/16/2009	1.86	< 0.5	1.13	< 0.05		< 0.05	< 2		
Surface Water	WOC ustrm5THCR	11/3/2009	18.4	< 0.5	7.81	< 0.05		< 0.05	< 2		
Surface Water	WOC ustrm5THCR	11/16/2009	16.2	< 0.5	5.95	0.062	< 0.05	< 0.05	< 2		

Table 2.8. Results From Ambient and Effluent Hg Monitoring Tasks, Fall 2009 (continued)

Media	Location	Date	Flow gpm	Cond. mS/cm	D.O. mg/L	Temp. degC	Turb. NTU	pH StdUnit	Flux Hg,Total mg/day	Flux Hg, Dis mg/day	Flux MeHg,Total mg/day	Flux MeHg, Dis mg/day
Effluent	106	11/16/2009	0.1	0.374	7.4	20.5	2	7.8	0.00229	0.000441	< 0.0000273	< 0.0000273
Effluent	207	11/16/2009	0.1	0.407	7.3	15.1	4	7.8	0.0312	0.00315	0.0001	0.00035
Effluent	211	11/16/2009	110	0.314	7.8	15.6	2	7.9	210	192	0.133	0.119
Effluent	235	11/16/2009	200	0.356	7.2	21.7	1	8.1	4.2	3.18	< 0.0545	< 0.0545
Effluent	264	11/3/2009	0.1	0.288	9.8	15.1	3	8.1	0.00402	0.00142	0.0000273	< 0.0000273
Effluent	302	11/16/2009	0.25	0.359	7.7	14.8	4	8	0.0386	0.0119	< 0.0000681	< 0.0000681
Effluent	304	11/16/2009	1.5	0.348	7.3	14.8	1	7.9	0.076	0.0431	0.00352	0.00229
Effluent	363	11/3/2009	3	0.825	9.1	17.6	6	8	0.213	0.149	0.00121	< 0.000818
Effluent	367	11/3/2009	0.1	0.275	8.2	16.2	2	7.9	0.0263	0.000676	< 0.0000273	< 0.0000273
Effluent	X02	11/16/2009	5	2.2	7.2	13.3	3	7.9	1.21	0.286	0.00537	< 0.00136
Effluent	X12	11/16/2009	183						29.3			
Surface Water	5THCR above 367	11/3/2009	501	0.275	9.1	14.9	3	7.8	9.37	4.59	< 0.137	< 0.137
Surface Water	5THCR at WOC	11/3/2009	665	0.316	9.1	14.7	3	8	35.6	9.53	< 0.181	< 0.181
Surface Water	5THCR at WOC	11/16/2009	820	0.306	8	14.8	3	7.9	88.9	17.3	0.277	< 0.223
Surface Water	5THCR below 161	11/3/2009	837	0.303	9.5	14.7	2	8	309	32.5	< 0.228	< 0.228
Surface Water	FCK 0.1	11/16/2009	330	0.264	9.6	13.1	4	8.2	6.69	1.13	< 0.0899	< 0.0899
Surface Water	MEK 0.6	11/16/2009	660	0.368	8.4	12.8	4	8.1	8.17	4.17	< 0.18	< 0.18
Surface Water	NWT 0.1	11/16/2009	380	0.37	8.8	11.7	9	7.9	2.42	1.16	< 0.104	< 0.104
Surface Water	WCK 1.5	11/16/2009	4101	0.361	7.4	13.4	42	7.9	574	34	1.86	< 1.12
Surface Water	WCK 2.3	11/16/2009	3610	0.355	8.7	13.5	3	8	140	32.5	1.06	< 0.984
Surface Water	WCK 2.9	11/16/2009	3020	0.35	7.9	14.1	10	8.1	290	44.6	1.17	< 0.823
Surface Water	WCK 3.4	11/16/2009	3094	0.353	7.4	14.4	7	8	134	37.1	1.25	1.05
Surface Water	WCK 4.1	11/16/2009	1970	0.336	9.3	14.7	4	8	177	58.9	0.633	0.591
Surface Water	WCK 6.8	11/16/2009	494	0.219	8.9	13.8	2	7.9	4.82	2.07	< 0.135	< 0.135

Table 2.8. Results From Ambient and Effluent Hg Monitoring Tasks, Fall 2009 (continued)

Media	Location	Date	Flow gpm	Cond. mS/cm	D.O. mg/L	Temp. degC	Turb. NTU	pH StdUnit	Flux Hg,Total mg/day	Flux Hg, Dis mg/day	Flux MeHg,Total mg/day	Flux MeHg, Dis mg/day
Surface Water	WOC at 3rdSt Br	11/16/2009	2150	0.351	9	14.7	5	8	300	93.6	2.43	< 0.586
Surface Water	WOC dstrm5THCR	11/3/2009	1860	0.305	9.2	14.5	3	8.2	172	53.5	< 0.507	< 0.507
Surface Water	WOC dstrm5THCR	11/16/2009	1900	0.321	8.2	14.8	3	8	162	51.1	0.57	< 0.518
Surface Water	WOC ustrm 211	11/16/2009	1000	0.336	9	15.1	2	7.9	10.1	6.16	< 0.273	< 0.273
Surface Water	WOC ustrm5THCR	11/3/2009	1050	0.368	8.9	15.1	2	7.9	105	44.7	< 0.286	< 0.286
Surface Water	WOC ustrm5THCR	11/16/2009	1100	0.326	8.9	15.1	2	7.9	97.1	35.7	0.372	< 0.3

Table 3.1. 2009 tissue concentrations in Catfish and Sunfish(a)

Parameter	Catfish (b)	Sunfish (b)
Clinch River downstream from all DOE ORR inputs (CRK 16)		
Metals(mg/kg)		
Aluminum	1.2	1.3
Antimony	0.099	0.1
Barium	0.015	0.045
Boron	0.059	0.065
Cadmium	<0.0075	0.0082
Calcium	81	420
Chromium	0.058	0.062
Cobalt	0.018	<0.013
Copper	0.3	0.22
Iron	2.7	3.3
Lithium	0.15	0.15
Magnesium	210	260
Manganese	0.18	0.38
Mercury	0.073	0.097
Phosphorous	2,200	2,100
Potassium	3,000	3,000
Selenium	0.81	1.0
Silicon	2.2	2.4
Sodium	340	610
Strontium	0.06	0.31
Thallium	0.0047	0.0089
Uranium	0.00017	0.00053
Zinc	5.9	12
Pesticides and PCBs (ug/kg)		
PCB-1254	69	U13
PCB-1260	95	29
Radionuclides (pCi/g) ©		
Alpha activity	0.0097	0.026*
Beta activity	1.4*	1.5*
Potassium-40	3.3*	2.9*

Table 3.1. (continued)

Parameter	Catfish (b)	Sunfish (b)
Clinch River downstream from ORNL (CRK 32)		
Metals (mg/kg)		
Aluminum	1.2	1.1
Antimony	0.082	0.066
Barium	0.017	0.078
Boron	0.088	0.063
Cadmium	0.012	0.0097
Calcium	83	760
Chromium	0.065	0.11
Cobalt	0.046	<0.013
Copper	0.17	0.26
Iron	2.6	4.6
Lead	0.056	<0.036
Lithium	0.15	0.15
Magnesium	230	240
Manganese	0.15	0.43
Mercury	0.084	0.022
Nickel	<0.021	0.035
Phosphorous	2,300	2,300
Potassium	3,200	2,800
Selenium	0.75	1.3
Silicon	4.6	2.0
Sodium	420	510
Strontium	0.052	0.66
Thallium	0.0058	0.012
Uranium	0.00027	0.00026
Zinc	5.4	12
Pesticides and PCBs (ug/kg)		
PCB-1254	130	U11
PCB-1260	270	18
Radionuclides (pCi/g) ©		
Alpha activity	0.1*	0.0088
Beta activity	1.4*	0.97*
Potassium-40	4.0*	2.8*

Table 3.1. (continued)

Parameter	Catfish (b)	Sunfish (b)
Clinch River (Solway Bridge) upstream from all DOE ORR inputs (CRK 70)		
Metals (mg/kg)		
Aluminum	1.1	1.6
Antimony	0.096	0.058
Barium	0.015	0.14
Boron	0.055	<0.046
Cadmium	0.011	0.0078
Calcium	120	1,400
Chromium	0.07	0.07
Copper	0.22	0.29
Iron	2.8	4.0
Lithium	0.16	0.16
Magnesium	210	240
Manganese	0.15	0.57
Mercury	0.038	0.021
Nickel	0.023	<0.021
Phosphorous	2,000	2,500
Potassium	3,000	2,800
Selenium	0.85	1.4
Silicon	1.1	2.6
Sodium	340	600
Strontium	0.087	1.3
Thallium	0.0062	0.0095
Titanium	<0.0067	0.017
Uranium	0.00017	0.00025
Zinc	6.1	14
Pesticides and PCBs (ug/kg)		
PCB-1254	15	U9.7
PCB-1260	62	40

Table 3.1. (continued)

Parameter	Catfish (b)	Sunfish (b)
Radionuclides (pCi/g) ©		
Alpha activity	0.18*	-0.0037
Beta activity	2.3*	1.0*
Potassium-40	3.2*	4.0*
Strontium-90	0.2*	0.01*

(a) Only parameters that were detected for at least one species 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) Radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected at or above MDA.

Table 3.2. Radiological constituents in settleable solids on the ORR, 2009[a]

Event	Cs-137	Gross alpha	Gross Beta	Be-7	K-40
White Oak Creek Headwaters upstream from ORNL (WOCHW)					
January	15 ± 10	5.9 ± 2.9	9.0 ± 3.4	b	570 ± 90
December	12 ± 9.0	14 ± 5.0	130 ± 10	b	640 ± 130
Melton Branch upstream from ORNL (MEK 2.1)					
January	32 ± 19	b	30 ± 7.0	b	960 ± 250
December	b	2.9 ± 1.7	8.2 ± 2.3	b	170 ± 70
White Oak Creek downstream from ORNL (WCK 2.6)					
January	280 ± 20	7.5 ± 4.0	140 ± 10	180 ± 90	640 ± 160
December	190 ± 10	10 ± 3.0	210 ± 10	b	390 ± 80
White Oak Lake at White Oak Dam (WCK 1.0)					
January	540 ± 30	11 ± 5.0	250 ± 20	b	610 ± 220
December	1000 ± 100	47 ± 13	970 ± 40	b	1200 ± 300

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

Table 3.3. Radiological constituents in sediments near the ORR, 2009[a]

Cs-137	Be-7	K-40
	Clinch River (Solway Bridge) upstream from all DOE ORR inputs (CRK 70)	
b	b	6.4 ± 4.0
	Clinch River downstream from ORNL (CRK 32)	
0.25 ± 0.01	b	16 ± 1.0
	Clinch River downstream from all DOE ORR inputs (CRK 16)	
b	b	8.0 ±0.5

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

Table 3.4. Surface water analyses (2009) at ORR Environmental Monitoring Plan surface water locations (a)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Clinch River downstream from all DOE ORR inputs (CRK 16)						
Field measurements						
Dissolved Oxygen (ppm)	4/4	7.7	11	9.1	0.77	n/a
pH (Std Unit)	4/4	6.5	7.8	n/a	n/a	n/a
Temperature (deg C)	4/4	9.3	23	16	3.6	n/a
Radionuclides (pCi/L)(f)						
Beta activity	3/4	U2.5*	6.5*	~4.4*	1.1	n/a
Water supply intake for the ETTP (CRK 23)						
Field measurements						
Dissolved Oxygen (ppm)	4/4	9.1	12	9.9	0.65	n/a
pH (Std Unit)	4/4	6.8	8.0	n/a	n/a	n/a
Temperature (deg C)	4/4	7.7	20	15	2.9	n/a
Radionuclides (pCi/L)(f)						
Beta activity	2/4	U1.8*	6.1*	~3.5*	0.93	n/a
Cesium-137	1/4	0.0	3.5*	0.87	0.87	120
Clinch River downstream from ORNL (CRK 32)						
Field measurements						
Dissolved Oxygen (ppm)	4/4	7.9	12	9.5	0.8	n/a
pH (Std Unit)	4/4	6.6	7.9	n/a	n/a	n/a
Temperature (deg C)	4/4	7.6	19	14	2.6	n/a
Radionuclides (pCi/L)(f)						
Alpha activity	1/4	U0.99	U2.1*	~1.5*	0.27	n/a
Beta activity	3/4	U1.9*	12*	~4.9	2.4	n/a
Cesium-137	1/4	0.0	11*	2.8	2.8	120

Table 3.4. (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Water supply intake for Knox County (CRK 58)						
Field measurements						
Dissolved Oxygen (ppm)	4/4	8.1	12	9.4	0.78	n/a
pH (Std Unit)	4/4	6.1	8.4	n/a	n/a	n/a
Temperature (deg C)	4/4	8.1	28	19	5.1	n/a
Radionuclides (pCi/L)(f)						
Beta activity	1/4	U0.5	3.1*	~1.9*	0.54	n/a
Bismuth-214	1/4	0.0	13*	3.3	3.3	24,000
Melton Hill Reservoir above city of Oak Ridge water intake (CRK 66)						
Field measurements						
Dissolved Oxygen (ppm)	4/4	8.0	12	9.6	0.93	n/a
pH (Std Unit)	4/4	6.1	8.4	n/a	n/a	n/a
Temperature (deg C)	4/4	8.6	28	19	5.0	n/a
Radionuclides (pCi/L)(f)						
Alpha activity	1/4	U0.075	2.5*	~1.2	0.5	n/a
Beta activity	2/4	U0.84	2.5*	~1.9*	0.38	n/a
Bismuth-214	1/4	0.0	11*	2.8	2.8	24,000

(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%; "BJ" indicates the value was estimated at or below the analytical detection limit and the parameter was detected in the lab blank, and "<" indicates the value for a parameter was not quantifiable at the analytical detection limit.
(c) A tilde (~) indicates that estimated values and/or detection limits were used in the calculation.
(d) Standard error of the mean.
(e) Tennessee General Water Quality Criteria for Recreation and Domestic Use, as amended (CRK 16, CRK 23, CRK 32, CRK 58, and CRK66). 4% of DOE DCG used for radionuclides, where applicable.
(f) Individual and average radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected at or above MDA.

Table 4.1. Y-12 Complex Discharge Point 021, OUTFALL 021

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	5	0.346	0.0043	0.092	d	0
pH, Standard Unit	5	8.2	7.9	d	9/ 6(e)	0
Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.188	0

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

Table 4.2. Y-12 Complex Discharge Point 051, OUTFALL 051

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	52	0.2088	0.0173	0.0572	d	0
pH, Standard Unit	12	7.2	6.8	d	9/ 6(e)	0
Mercury	52	0.004	0.0008	0.001	d	0

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

Table 4.3. Y-12 Plant Discharge Point 055, OUTFALL 055

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	13	0.05	0.00005	0.0059	d	0
pH, Standard Unit	14	8.1	7.2	d	9/ 6(e)	0
Total Residual Chlorine	8	<0.05	<0.05	<0.05	0.5	0
Mercury	52	0.0005	<0.0002	<0.0002	0.004	0

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

Table 4.4. Y-12 Complex Discharge Point 109, OUTFALL 109

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	5	0.374	0.0994	0.176	d	0
pH, Standard Unit	7	8.0	7.5	d	9/ 6(e)	0
Total Residual Chlorine	6	<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 4.5. Y-12 Complex Discharge Point 125, OUTFALL 125

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	365	0.162	0.002	0.02	d	0
IC 25 Ceriodaphnia, %	1	>36.0	>36.0	>36.0	d	0
IC 25 Fathead Minnows, %	1	>36.0	>36.0	>36.0	d	0
pH, Standard Unit	12	7.8	7.2	d	9/ 6(e)	0
Total Residual Chlorine	48	0.964	<0.05	<0.05	d	0
Cadmium	12	<0.001	<0.0002	<0.0005	0.025	0
Mercury	52	0.0004	<0.0002	<0.0002	d	0
Lead	12	0.0023	<0.0002	<0.0008	1.19	0
PCB, Total	4	0.0005U	0.0005U	0.0005U	0.002	0

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

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

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	4	18.0	+/-4.1	2.5*	+/-2.8	12	3.4	e	4.0E-04
Beta activity (pCi/L)	4	7.8	+/-3.6	2.8*	+/-3.4	4.8	1.1	e	1.6E-04
Cobalt-60 (pCi/L)	4	2.4*	+/-2.6	-1.9*	+/-2.3	0.22	0.88	0.0045	7.6E-06
Cesium-137 (pCi/L)	4	1.3*	+/-2.3	-1.1*	+/-2.5	0.11	0.60	0.0036	3.6E-06
Plutonium-238 (pCi/L)	4	0.13*	+/-0.39	-0.19*	+/-0.36	-0.076	0.073	-0.19	-2.6E-06
Plutonium-239/240 (pCi/L)	4	0.16*	+/-1	-0.61*	+/-1.2	-0.26	0.17	-0.86	-8.6E-06
Radium-228 (pCi/L)	4	20.0	+/-16	-10.0*	+/-16	5.88	6.38	5.88	1.97E-04
Thorium-228 (pCi/L)	4	0.012*	+/-0.24	-0.42*	+/-12	-0.16	0.10	-0.039	-5.3E-06
Thorium-230 (pCi/L)	4	0.16*	+/-0.92	-4.5*	+/-9.1	-1.2	1.1	-0.38	-3.9E-05
Thorium-232 (pCi/L)	4	0.04*	+/-0.1	-0.18*	+/-0.54	-0.04	0.05	-0.08	-1E-06
Tritium (pCi/L)	4	300.0*	+/-490	-220.0*	+/-490	75.0	114.1	0.0038	2.52E-03
Uranium-234 (pCi/L)	4	5.3	+/-0.81	1.9	+/-0.9	4.2	0.77	0.84	1.4E-04
Uranium-235 (pCi/L)	4	0.18	+/-0.14	-0.032*	+/-0.2	0.095	0.047	0.016	3.2E-06
Uranium-236 (pCi/L)	4	0.091*	+/-0.25	-0.014*	+/-0.11	0.041	0.022	0.0082	1.4E-06
Uranium-238 (pCi/L)	4	4.4	+/-0.72	1.6	+/-0.43	3.6	0.68	0.60	1.2E-04

(e) Not applicable
* Provisional Result

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

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	365	1.548	0.045	0.20	d	0
IC 25 Ceriodaphnia, %	1	>20.0	>20.0	>20.0	d	0
IC 25 Fathead Minnows, %	1	>20.0	>20.0	>20.0	d	0
pH, Standard Unit	14	8.8	7.4	d	9/ 6(e)	0
Total Residual Chlorine	107	0.84	<0.05	<0.05	d	0
Lead	12	0.0046	0.0002	0.0013	1.19	0
PCB, Total	4	0.0005U	0.000032J	0.0004JU	0.002	0

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

Table 4.8. Y-12 Complex Discharge Point 135, OUTFALL 135

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	4	16.0	+/-3.9	5.0	+/-2.9	8.4	2.6	e	2.3E-03
Beta activity (pCi/L)	4	6.6	+/-3.4	2.4*	+/-3.4	4.1	0.88	e	1.1E-03
Cobalt-60 (pCi/L)	4	2.1*	+/-2	-2.5*	+/-2.4	0.28	1.0	0.0057	7.7E-05
Cesium-137 (pCi/L)	4	1.2*	+/-2.3	-1.7*	+/-2.6	-0.37	0.72	-0.012	-1.0E-04
Neptunium-237 (pCi/L)	4	0.2*	+/-3.1	-0.74*	+/-3.1	-0.2	0.2	-0.6	-5E-05
Plutonium-238 (pCi/L)	4	0.017*	+/-0.46	-0.1*	+/-0.28	-0.04	0.03	-0.1	-1E-05
Plutonium-239/240 (pCi/L)	4	0.3*	+/-0.92	-0.33*	+/-0.83	-0.06	0.1	-0.2	-2E-05
Radium-226 (pCi/L)	4	0.53*	+/-0.66	-0.87*	+/-4.3	-0.19	0.31	-0.19	-5.1E-05
Radium-228 (pCi/L)	4	2.2*	+/-1.4	-1.7*	+/-1.4	-0.0050	0.81	-0.005	-1.4E-06
Strontium-89/90 (pCi/L)	4	1.1*	+/-1.8	0.43*	+/-1.8	0.79	0.15	0.079	2.2E-04
Total Radium Alpha (pCi/L)	4	2.1	+/-0.53	0.001*	+/-0.23	0.9	0.5	e	2.E-04
Technetium-99 (pCi/L)	4	6.3*	+/-9.4	4.5*	+/-10	5.2	0.39	0.0052	1.4E-03
Thorium-228 (pCi/L)	4	0.21*	+/-0.36	-0.2*	+/-12	0.04	0.09	0.01	1E-05
Thorium-230 (pCi/L)	4	1.6*	+/-1.1	-3.7*	+/-9.1	-0.50	1.1	-0.17	-1.4E-04
Thorium-232 (pCi/L)	4	0.045*	+/-0.18	-0.28*	+/-0.56	-0.066	0.073	-0.13	-1.8E-05
Uranium-234 (pCi/L)	4	3.8	+/-1	1.7*	+/-1.9	2.4	0.48	0.48	6.5E-04
Uranium-235 (pCi/L)	4	0.21*	+/-0.22	-0.07*	+/-0.24	0.1	0.06	0.02	3E-05
Uranium-236 (pCi/L)	4	0.1*	+/-0.24	-0.019*	+/-0.039	0.03	0.03	0.007	9E-06
Uranium-238 (pCi/L)	4	2.7	+/-0.57	1.7	+/-0.41	2.2	0.21	0.36	5.9E-04

(e) Not applicable
* Provisional Result

Table 4.9. Y-12 Complex Discharge Point C11, STORMWATER MONITORING SITE C11

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	356	20.052	0.474	5.67	d	0
pH, Standard Unit	27	8.0	7.2	d	9/ 6(e)	0
TEMPERATURE, deg C	27	27.2	10.3	17.2	30.5	0
Total Residual Chlorine	26	<0.05	<0.05	<0.05	d	0
Silver	13	<0.0004	<0.0002	<0.0003	d	0
Aluminum	13	4.39	<0.2	<0.8	d	0
Arsenic	13	<0.002	<0.002	<0.002	d	0
Boron	13	0.142	<0.1	<0.1	d	0
Barium	13	0.0733	0.0356	0.0447	d	0
Beryllium	13	<0.0002	<0.0002	<0.0002	d	0
Cadmium	13	0.0019	<0.0002	<0.0007	d	0
Cobalt	13	0.002	<0.0002	<0.0005	d	0
Chromium	13	0.0058	<0.001	<0.003	d	0
Copper	13	0.0228	0.0024	0.0065	d	0
Hexane Extractable	13	<6.2	<5.6	<5.8	d	0
Mercury	27	0.0019	<0.0002	<0.0005	d	0
Lithium	13	0.15	<0.01	<0.04	d	0
Magnesium	13	12.5	5.76	10.6	d	0
Molybdenum	13	0.0268	0.0039	0.0089	d	0
Total Nitrogen	12	6.29	0.0587	2.26	d	0
Nickel	13	0.006	<0.002	<0.003	d	0
Nitrate/Nitrite as Nitrogen	13	4.58	0.0587	1.79	d	0
Phosphorus	13	<0.5	<0.5	<0.5	d	0
Lead	13	0.0075	<0.0002	<0.002	d	0
Antimony	13	<0.2	<0.001	<0.02	d	0
Strontium	13	0.167	0.075	0.13	d	0
Surfactant	13	<0.1	<0.05	<0.06	d	0
Suspended Solids	25	108.0	1.6	11	d	0
Thallium	13	<0.2	<0.0002	<0.02	d	0
Uranium	13	0.234	0.0034	0.034	d	0
Vanadium	13	<0.02	<0.02	<0.02	d	0
Zinc	13	0.184	0.0153	0.0492	d	0

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

Table 4.10. Y-12 Complex Discharge Point 200, OUTFALL 200

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	53	10.24	0.6	2	b	0
IC 25 Ceriodaphnia, %	1	>100.0	>100.0	>100.0	b	0
IC 25 Fathead Minnows, %	1	>100.0	>100.0	>100.0	b	0
pH, Standard Unit	55	8.0	7.3	b	9/ 6(e)	0
Total Residual Chlorine	14	<0.05	<0.05	<0.05	b	0
Cadmium	12	0.0016	0.0005	<0.0009	0.025	1
Dissolved Solids	4	274.0	164.0	214.5	b	0
Hexane Extractable	53	6.73	<5.5	<6.0	15	0
Mercury	52	0.0023	0.0006	0.001	b	0
Nitrate/Nitrite as Nitrogen	4	5.86	4.41	4.92	b	0
Lead	12	0.0055	<0.0002	<0.002	1.19	0
PCB, Total	4	0.0005U	0.0005U	0.0005U	b	0
Uranium	12	0.122	0.0154	0.064	b	0

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

Table 4.11. Y-12 Complex Discharge Point 200, OUTFALL 200

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	12	77.0	+/-7	13.0	+/-3.7	31.6	5.14	e	8.22E-02
Beta activity (pCi/L)	12	32.0	+/-6.8	3.4*	+/-3.6	14.	2.5	e	3.71E-02
Cobalt-60 (pCi/L)	12	2.5*	+/-2.6	-1.4*	+/-2.3	0.40	0.38	0.0081	1.0E-03
Cesium-137 (pCi/L)	12	2.0*	+/-2.3	-2.0*	+/-3.8	-0.16	0.34	-0.0053	-4.1E-04
Neptunium-237 (pCi/L)	12	4.5	+/-1.3	-1.3*	+/-2.9	0.15	0.44	0.51	4.0E-04
Plutonium-238 (pCi/L)	12	0.14*	+/-0.31	-0.38*	+/-0.47	-0.078	0.036	-0.19	-2.0E-04
Plutonium-239/240 (pCi/L)	12	0.3*	+/-0.93	-0.43*	+/-0.71	-0.08	0.06	-0.3	-2E-04
Radium-226 (pCi/L)	12	0.59	+/-0.40	-0.17*	+/-0.21	0.24	0.071	0.24	6.3E-04
Radium-228 (pCi/L)	12	0.73*	+/-0.79	-2.1*	+/-0.82	-0.15	0.23	-0.15	-4.0E-04
Technetium-99 (pCi/L)	12	16.0	+/-9.3	0.0077*	+/-0.009	8.1	1.5	0.0081	2.1E-02
Thorium-228 (pCi/L)	12	1.0*	+/-0.0063	-0.35*	+/-17	0.028	0.094	0.0071	7.4E-05
Thorium-230 (pCi/L)	12	4.6*	+/-0.017	-4.5*	+/-7.7	-0.086	0.70	-0.029	-2.2E-04
Thorium-232 (pCi/L)	12	0.061*	+/-0.12	-1.0*	+/-0.0037	-0.17	0.094	-0.34	-4.4E-04
Tritium (pCi/L)	12	1000.0	+/-550	-190.0*	+/-490	322.5	111.0	0.0161	8.39E-01
Uranium-234 (pCi/L)	12	8.4	+/-2.8	1.6*	+/-5.5	4.7	0.59	0.9367	1.22E-02
Uranium-235 (pCi/L)	12	1.5	+/-0.44	0.031*	+/-1.8	0.38	0.12	0.063	9.8E-04
Uranium-236 (pCi/L)	11	0.1*	+/-0.23	0.03*	+/-0.17	0.06	0.007	0.01	2E-04
Uranium-238 (pCi/L)	12	37.0	+/-4.4	4.2	+/-0.98	19	3.2	3.2	5.0E-02

(e) Not applicable
* Provisional Result

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

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	12	0.065	0.001	0.03	b	0
pH, Standard Unit	4	7.9	7.1	d	9/ 6(e)	0
Silver	4	<0.002	<0.0005	<0.0009	0.05	0
Cadmium	4	<0.005	0.001	<0.002	0.15	0
Chromium	4	<0.02	0.0095	<0.01	1	0
Copper	4	0.0231	0.0149	0.0197	1	0
Cyanide	4	<0.01	<0.01	<0.01	1.2	0
Dissolved Solids	2	5310.0	5220.0	5265.0	b	0
Hexane Extractable	4	<6.2	<5.6	<5.8	15	0
Mercury	4	<0.0002	<0.0002	<0.0002	b	0
Lithium	4	1.72	1.45	1.62	b	0
Nickel	4	0.0646	0.0528	0.0596	3.98	0
Nitrate/Nitrite as Nitrogen	4	14.9	11.8	14.1	100	0
Lead	4	0.0026	<0.0005	<0.001	0.2	0
PCB, Total	1	0.0005U	0.0005U	0.0005U	0.001	0
Selenium	4	<0.04	<0.01	<0.02	b	0
Suspended Solids	4	3.5	2.0	2.8	40	0
Sum of TTO Analysis	1	<0.01	<0.01	<0.01	2.13	0
Uranium	6	0.0264	0.0054	0.010	b	0
Zinc	4	0.157	0.085	0.12	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 502, WEST END TREATMENT FACILITY

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	4	-18.0*	+/-33	-20.0*	+/-32	-19.0	0.577	e	-8.99E-04
Beta activity (pCi/L)	4	220.0	+/-48	190.0	+/-40	205.0	8.660	e	9.700E-03
Cobalt-60 (pCi/L)	1	0.97*	+/-2.6	0.97*	+/-2.6	0.97		0.0194	4.59E-05
Cesium-137 (pCi/L)	1	3.0*	+/-5	3.0*	+/-5	3.0		0.1	1.42E-04
Neptunium-237 (pCi/L)	1	-0.067*	+/-0.31	-0.067*	+/-0.31	-0.067		-0.2233	-3.17E-06
Plutonium-238 (pCi/L)	1	-0.001*	+/-0.041	-0.001*	+/-0.041	-0.001		-0.0025	-4.73E-08
Plutonium-239/240 (pCi/L)	1	0.0082*	+/-0.082	0.0082*	+/-0.082	0.0082		0.0273	3.88E-07
Radium-226 (pCi/L)	1	0.34	+/-0.32	0.34	+/-0.32	0.34		0.34	1.61E-05
Radium-228 (pCi/L)	1	1.0*	+/-0.71	1.0*	+/-0.71	1.0		1.0	4.73E-05
Strontium-89/90 (pCi/L)	1	1.4*	+/-1.8	1.4*	+/-1.8	1.4		0.14	6.62E-05
Total Radium Alpha (pCi/L)	1	0.24*	+/-0.19	0.24*	+/-0.19	0.24		e	1.14E-05
Technetium-99 (pCi/L)	1	38.0	+/-9.4	38.0	+/-9.4	38.0		0.038	1.80E-03
Thorium-228 (pCi/L)	1	0.011*	+/-0.051	0.011*	+/-0.051	0.011		0.0027	5.21E-07
Thorium-230 (pCi/L)	1	-0.001*	+/-0.096	-0.001*	+/-0.096	-0.001		-0.0003	-4.73E-08
Thorium-232 (pCi/L)	1	-0.016*	+/-0.022	-0.016*	+/-0.022	-0.016		-0.032	-7.57E-07
Uranium-234 (pCi/L)	1	0.043*	+/-0.076	0.043*	+/-0.076	0.043		0.0086	2.03E-06
Uranium-235 (pCi/L)	1	-0.0031*	+/-0.02	-0.0031*	+/-0.02	-0.0031		-0.0005	-1.47E-07
Uranium-236 (pCi/L)	1	-0.0017*	+/-0.01	-0.0017*	+/-0.01	-0.0017		-0.0003	-8.04E-08
Uranium-238 (pCi/L)	1	0.11	+/-0.036	0.11	+/-0.036	0.11		0.0183	5.21E-06

(e) Not applicable
* Provisional Result

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

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	225	0.029	0.00001	0.01	d	0
pH, Standard Unit	12	7.9	7.1	d	9/ 6(e)	0
Copper	12	<0.005	<0.002	<0.004	d	0
Lead	12	0.0045	<0.0002	<0.0008	d	0
PCB, Total	4	0.0005U	0.0005U	0.0005U	0.001	0
Uranium	4	0.022	0.0127	0.018	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 4.15. Y-12 Complex Discharge Point 512, OUTFALL 512 (GWTF)

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	8	22.0	+/-4.6	0.61*	+/-2.6	8.85	3.16	e	1.63E-04
Beta activity (pCi/L)	8	14.0	+/-4.4	4.7*	+/-3.5	12	1.5	e	2.1E-04
Cobalt-60 (pCi/L)	4	2.7*	+/-2.5	-1.1*	+/-2.3	0.52	0.80	0.010	9.5E-06
Cesium-137 (pCi/L)	4	0.31*	+/-2.2	-1.2*	+/-2.2	-0.50	0.31	-0.017	-9.2E-06
Neptunium-237 (pCi/L)	4	0.0*	+/-0.44	-1.4*	+/-2.9	-0.38	0.34	-1.3	-7.0E-06
Plutonium-238 (pCi/L)	4	0.29*	+/-0.52	0.096*	+/-0.31	0.17	0.043	0.43	3.2E-06
Plutonium-239/240 (pCi/L)	4	0.27*	+/-0.88	-0.011*	+/-0.99	0.067	0.068	0.22	1.2E-06
Radium-226 (pCi/L)	4	0.78	+/-0.53	0.075*	+/-0.091	0.33	0.16	0.33	6.0E-06
Radium-228 (pCi/L)	4	6.3*	+/-9.1	0.37*	+/-1.2	2.0	1.4	2.0	3.8E-05
Strontium-89/90 (pCi/L)	4	2.7*	+/-3	0.54*	+/-1.1	1.4	0.46	0.14	2.6E-05
Total Radium Alpha (pCi/L)	4	0.5	+/-0.27	0.11*	+/-0.18	0.3	0.08	e	5.E-06
Technetium-99 (pCi/L)	4	3.7*	+/-8.3	-3.4*	+/-9.5	0.38	1.9	0.00040	6.9E-06
Thorium-228 (pCi/L)	4	0.088*	+/-12	-0.26*	+/-12	-0.029	0.078	-0.0072	-5.3E-07
Thorium-230 (pCi/L)	4	0.01*	+/-0.86	-4.4*	+/-9.1	-1.	1.	-0.4	-2E-05
Thorium-232 (pCi/L)	4	-0.0049*	+/-0.11	-0.18*	+/-0.54	-0.058	0.041	-0.12	-1.1E-06
Uranium-234 (pCi/L)	4	37.0	+/-4.1	0.66*	+/-1.8	9.8	9.1	2.0	1.8E-04
Uranium-235 (pCi/L)	4	0.96	+/-0.4	0.031*	+/-0.38	0.29	0.22	0.049	5.4E-06
Uranium-236 (pCi/L)	4	0.15*	+/-0.17	-0.041*	+/-0.15	0.038	0.040	0.0076	7.0E-07
Uranium-238 (pCi/L)	4	6.7	+/-1	3.4	+/-0.62	5.3	0.71	0.88	9.7E-05

(e) Not applicable
* Provisional Result

Table 4.16. Y-12 Complex Discharge Point 551, CENTRAL MERCURY TREATMENT UNIT

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	364	0.017	0.004	0.007	d	d
pH, Std Unit	52	7.9	6.7	d	9/ 6(e)	0
Mercury	52	0.0001	<0.0001	<0.0001	0.004	0
Uranium	4	0.005	<0.001	<0.003	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 4.17. Y-12 Complex Discharge Point 551, CENTRAL MERCURY TREATMENT UNIT

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	4	7.7	+/-3.4	-0.68*	+/-2.5	3.6	2.2	e	3.6E-05
Beta activity (pCi/L)	4	13.0	+/-3.9	-0.2*	+/-3.2	5	3	e	5E-05
Cobalt-60 (pCi/L)	4	23.0*	+/-28	-2.5*	+/-2.1	5.65	5.8	0.11	5.7E-05
Cesium-137 (pCi/L)	4	2.5*	+/-2.2	-1.1*	+/-3.8	0.32	0.78	0.011	3.3E-06
Neptunium-237 (pCi/L)	4	0.065*	+/-1.4	-0.82*	+/-1.9	-0.28	0.19	-0.92	-2.8E-06
Plutonium-238 (pCi/L)	4	0.081*	+/-2.5	-0.29*	+/-0.45	-0.086	0.081	-0.21	-8.6E-07
Plutonium-239/240 (pCi/L)	4	0.019*	+/-0.083	-0.33*	+/-0.66	-0.10	0.078	-0.34	-1.0E-06
Radium-226 (pCi/L)	4	0.5	+/-0.36	-0.2*	+/-1.0	0.07	0.2	0.07	7E-07
Radium-228 (pCi/L)	4	0.38*	+/-0.77	0.12*	+/-0.54	0.26	0.069	0.26	2.6E-06
Strontium-89/90 (pCi/L)	4	1.1*	+/-2.3	-1.6*	+/-1.5	-0.14	0.64	-0.014	-1.5E-06
Total Radium Alpha (pCi/L)	4	0.61	+/-0.25	0.25*	+/-0.18	0.42	0.094	e	4.2E-06
Technetium-99 (pCi/L)	4	11.0*	+/-8.5	-2.5*	+/-9.5	4.4	2.8	0.0044	4.4E-05
Thorium-228 (pCi/L)	4	0.079*	+/-8	-0.064*	+/-0.26	0.0014	0.029	0.0004	1.4E-08
Thorium-230 (pCi/L)	4	0.058*	+/-0.8	-2.4*	+/-13	-0.76	0.58	-0.26	-7.7E-06
Thorium-232 (pCi/L)	4	0.013*	+/-0.13	-0.68*	+/-3.7	-0.18	0.17	-0.36	-1.8E-06
Uranium-234 (pCi/L)	4	0.92*	+/-2.5	-0.013*	+/-0.068	0.42	0.22	0.084	4.2E-06
Uranium-235 (pCi/L)	4	0.049*	+/-0.27	-0.1*	+/-0.27	-0.02	0.03	-0.004	-2E-07
Uranium-236 (pCi/L)	3	0.039*	+/-0.16	-0.002*	+/-0.0098	0.01	0.01	0.003	1E-07
Uranium-238 (pCi/L)	4	2.4	+/-0.59	0.012*	+/-0.015	1.0	0.54	0.17	1.0E-05

(e) Not applicable
* Provisional Result

Table 4.18. Y-12 Complex Discharge Point SS6, SANITARY SEWER STATION 6

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	52	15.0	+/-4.4	-0.034*	+/-4.2	4.0	0.41	e	3.3E-03
Beta activity (pCi/L)	52	18.0	+/-5.3	0.024*	+/-0.036	7.2	0.50	e	6.0E-03
Cobalt-60 (pCi/L)	1	0.85*	+/-2.4	0.85*	+/-2.4	0.85		0.017	7.05E-04
Cesium-137 (pCi/L)	1	1.0*	+/-2.3	1.0*	+/-2.3	1.0		0.0333	8.30E-04
Plutonium-238 (pCi/L)	1	-0.011*	+/-0.25	-0.011*	+/-0.25	-0.011		-0.0275	-9.13E-06
Plutonium-239/240 (pCi/L)	1	-0.47*	+/-0.62	-0.47*	+/-0.62	-0.47		-1.5667	-3.90E-04
Radium-228 (pCi/L)	1	10.0*	+/-9.1	10.0*	+/-9.1	10.0		10.0	8.30E-03

(e) Not applicable
* Provisional Result

Table 4.19. Y-12 Complex Discharge Point SS6, SANITARY SEWER STATION 6

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, gpd	365	1949000.0	169000.0	600430.1	d	d
pH, Standard Unit	12	8.1	7.1	d	9/ 6(e)	0
1,1,1-Trichloroethane	5	0.01U	0.005U	0.006U	d	d
Silver	12	0.0008	<0.0002	<0.0004	0.1	0
Arsenic	12	0.0027	<0.002	<0.002	0.025	0
Beryllium	12	0.0004	<0.0002	<0.0002	d	d
Benzene	5	0.01U	0.005U	0.006U	d	0
Biochemical Oxygen	13	91.7	30.4	48.8	300	0
Carbon tetrachloride	5	0.01U	0.005U	0.006U	d	d
Cadmium	12	0.0011	<0.0002	<0.0005	0.005	0
Chloroform	5	0.004J	0.002J	0.003J	d	d
Tetrachloroethene	5	0.01U	0.003U	0.005U	d	d
Cobalt	12	0.0115	0.0006	0.003	d	d
Chromium	11	0.0128	<0.001	<0.005	0.075	0
Copper	12	0.0543	0.0218	0.0326	0.21	0
Cyanide	12	<0.01	<0.01	<0.01	0.062	0
Ethylbenzene	5	0.01U	0.005U	0.006U	d	0
Iron	12	4.98	0.267	1.76	30	0
Hexane Extractable	12	11.7	<5.9	<7.8	50	0
Mercury	12	0.0076	0.0003	0.004	0.035	0
Kjeldahl Nitrogen	12	23.0	<0.5	<12	90	0
Methylene chloride	5	0.01U	0.005U	0.006U	d	0
Manganese	12	0.173	0.0246	0.0576	d	d
Molybdenum	12	0.0155	0.0042	0.0087	d	0
Nickel	12	0.0234	0.0027	0.0081	0.032	0
Lead	12	0.0017	0.0004	0.001	0.074	0
Phenols - Total Recoverable	12	0.0262	0.0089	0.017	0.3	0
Selenium	12	<0.004	<0.004	<0.004	d	0
Suspended Solids	12	117.0	44.5	66.7	300	0
trans-1,2-Dichloroethene	5	0.01U	0.005U	0.006U	d	d
Thorium	12	0.0006	<0.0002	<0.0003	d	d
Toluene	5	0.01U	0.005U	0.006U	d	0

Table 4.19. (continued)

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Trichloroethene	5	0.027	0.001J	0.01UJ	d	0
Zinc	12	0.173	0.0745	0.110	0.75	0

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

Table 4.20. Y-12 Complex Category I Outfalls

From: 2009/01/01 To: 2009/12/31

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
003	Flow, mgd	1	0.0864	0.0864	0.0864	d	d
	pH, Standard Units	1	7.4	7.4	d	9/ 6(e)	0
006	Flow, mgd	1	0072	0.072	0.072	d	d
	pH, Standard Units	1	7.7	7.7	d	9/ 6(e)	0
007	Flow, mgd	1	0.0288	0.0288	0.0288	d	d
	pH, Standard Units	1	7.1	7.1	d	9/ 6(e)	0
033	Flow, mgd	1	0.072	0.072	0.072	d	d
	pH, Standard Units	1	7.5	7.5	d	9/ 6(e)	0
041	Flow, mgd	1	0.0008	0.0008	0.0008	d	d
	pH, Standard Units	1	7.8	7.8	d	9/ 6(e)	0
044	Flow, mgd	1	0.0216	0.0216	0.0216	d	d
	pH, Standard Units	1	8.4	8.4	d	9/ 6(e)	0
045	Flow, mgd	1	0.0015	0.0015	0.0015	d	d
	pH, Standard Units	1	7.9	7.9	d	9/ 6(e)	0
046	Flow, mgd	1	0.0046	0.0046	0.0046	d	d
	pH, Standard Units	1	7.6	7.6	d	9/ 6(e)	0
057	Flow, mgd	1	0.0004	0.0004	0.0004	d	d
	pH, Standard Units	1	8.3	8.3	d	9/ 6(e)	0
058	Flow, mgd	1	0.0001	0.0001	0.0001	d	d
	pH, Standard Units	1	8.1	8.1	d	9/ 6(e)	0

Table 4.20. (continued)

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
062	Flow, mgd	1	0.0008	0.0008	0.0008	d	d
	pH, Standard Units	1	7.9	7.9	d	9/ 6(e)	0
063	Flow, mgd	1	0.0144	0.0144	0.0144	d	d
	pH, Standard Units	1	8.4	8.4	d	9/ 6(e)	0
064	Flow, mgd	1	0.0029	0.0029	0.0029	d	d
	pH, Standard Units	1	8.1	8.1	d	9/ 6(e)	0
086	Flow, mgd	1	0.0004	0.0004	0.0004	d	d
	pH, Standard Units	1	7.2	7.2	d	9/ 6(e)	0
087	Flow, mgd	1	0.0288	0.0288	0.0288	d	d
	pH, Standard Units	1	8.4	8.4	d	9/ 6(e)	0
102	Flow, mgd	1	0.0008	0.0008	0.0008	d	d
	pH, Standard Units	1	7.7	7.7	d	9/ 6(e)	0
110	Flow, mgd	1	0.0019	0.0019	0.0019	d	d
	pH, Standard Units	1	7.9	7.9	d	9/ 6(e)	0
134	Flow, mgd	1	0.0004	0.0004	0.0004	d	d
	pH, Standard Units	1	8.2	8.2	d	9/ 6(e)	0
S18	Flow, mgd	1	5.1	5.1	5.1	d	d
	pH, Standard Units	1	7.5	7.5	d	9/ 6(e)	0

Table 4.20. (continued)

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
S26	Flow, mgd	1	0.0432	0.0432	0.0432	d	d
	pH, Standard Units	1	7.3	7.3	d	9/ 6(e)	0

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

Table 4.21. Y-12 Complex Category II Outfalls

From: 2009/01/01 To: 2009/12/31

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
002	Flow, mgd	2	0.864	0.1296	0.497	d	d
	pH, Standard Units	2	8.0	7.3	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
004	Flow, mgd	2	0.085	0.0072	0.046	d	d
	pH, Standard Units	2	7.9	7.3	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
014	Flow, mgd	2	0.1037	0.0216	0.0626	d	d
	pH, Standard Units	2	7.9	7.4	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
016	Flow, mgd	2	0.0216	0.0004	0.0011	d	d
	pH, Standard Units	2	7.6	7.5	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
019	Flow, mgd	3	0.0576	0.0023	0.0315	d	d
	pH, Standard Units	3	8.1	7.5	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
020	Flow, mgd	2	0.0864	0.0144	0.0504	d	d
	pH, Standard Units	2	8.3	8.0	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
047	Flow, mgd	2	0.0864	0.0288	0.0576	d	d
	pH, Standard Units	2	7.8	7.7	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
048	Flow, mgd	2	0.0043	0.0014	0.0029	d	d
	pH, Standard Units	2	7.8	7.8	d	9/64(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0

Table 4.21. (continued)

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
054	Flow, mgd	2	0.0173	0.0008	0.009	d	d
	pH, Standard Units	2	7.2	7.2	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
067	Flow, mgd	2	0.0144	0.0058	0.0101	d	d
	pH, Standard Units	2	7.6	7.5	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	1
083	Flow, mgd	2	0.1728	0.0144	0.0936	d	d
	pH, Standard Units	2	7.8	7.3	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
088	Flow, mgd	2	0.0114	0.0029	0.0071	d	d
	pH, Standard Units	2	8.0	7.5	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
099	Flow, mgd	2	0.0173	0.0076	0.0125	d	d
	pH, Standard Units	2	7.6	7.5	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
126	Flow, mgd	2	0.0014	0.0004	0.0009	d	d
	pH, Standard Units	2	8.1	7.8	d	9/ 6(e)	0
	Total Residual Chlorine	2	<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 4.22. Y-12 Complex Category III Outfalls

From: 2009/01/01 To: 2009/12/31

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
034	Flow, mgd	2	0.2016	0.1152	0.1584	d	d
	pH, Standard Units	2	7.7	7.2	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
042	Flow, mgd	2	0.0023	0.0005	0.0014	d	d
	pH, Standard Units	2	7.9	7.7	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
071	Flow, mgd	2	0.0605	0.0144	0.0374	d	d
	pH, Standard Units	2	7.8	7.6	d	9/ 6(e)	0
	Total Residual Chlorine	2	0.0711	<0.05	<0.06	0.5	0
113	Flow, mgd	2	0.0288	0.0029	0.0158	d	d
	pH, Standard Units	2	8.6	8.2	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0
114	Flow, mgd	2	0.0288	0.0043	0.0166	d	d
	pH, Standard Units	2	8.4	7.6	d	9/ 6(e)	0
	Total Residual Chlorine	2	<0.05	<0.05	<0.05	0.5	0

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

Table 4.23. Y-12 Complex Discharge Point 9422-1, SWHISS STATION 9422-1, Outfall EFP

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
DISSOLVED OXYGEN	54	10.8	7.3	8.9	d	0
Flow, mgd	365	56.038	2.524	8.928	d	0
pH, Standard Unit	210	9.0	6.9	d	9/ 6(e)	0
TEMPERATURE, deg C	54	26.7	9.4	16	d	0
Silver	53	<0.0004	<0.0002	<0.0002	d	0
Aluminum	53	2.57	<0.2	<0.5	d	0
Arsenic	53	0.0022	<0.002	<0.002	d	0
Boron	53	<0.1	<0.1	<0.1	d	0
Barium	53	0.0561	0.0385	0.0441	d	0
Beryllium	53	0.0003	<0.0002	<0.0002	d	0
Cadmium	53	0.0014	<0.0002	<0.0004	d	0
Cobalt	53	0.0013	<0.0002	<0.0003	d	0
Chromium	53	<0.02	<0.001	<0.002	d	0
Copper	53	0.0115	<0.002	<0.004	d	0
Mercury	55	0.0021	0.0001	0.0003	d	0
Lithium	53	0.0351	0.0109	0.0176	d	0
Magnesium	53	13.2	6.32	10.6	d	0
Molybdenum	53	0.012	0.0039	0.0066	d	0
Nickel	53	0.0062	<0.002	<0.002	d	0
Nitrate/Nitrite as Nitrogen	53	2.34	<0.05	<1	d	0
Lead	53	0.0057	<0.0002	<0.001	d	0
PCB, Total	1	0.0005U	0.0005U	0.0005U	d	0
Phosphate as Phosphorus	53	0.399	<0.31	<0.31	d	0
Antimony	53	0.001	<0.001	<0.001	d	0
Strontium	53	0.159	0.0823	0.124	d	0
Suspended Solids	53	75.0	<1.0	<8.6	d	0
Thallium	53	<0.0002	<0.0002	<0.0002	d	0
Uranium	25	0.0298	0.0033	0.014	d	d
Vanadium	53	<0.02	<0.02	<0.02	d	0
Zinc	53	0.0864	0.0077	0.028	d	0

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

Table 4.24. Y-12 Complex Discharge Point 9422-1, SWHISS STATION 9422-1, Outfall EFP

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	13	12.0	+/-3.5	-0.33*	+/-2.5	5.5	1.1	e	6.8E-02
Beta activity (pCi/L)	13	10.0	+/-3.7	-0.75*	+/-3	4.2	0.81	e	5.2E-02
Cobalt-60 (pCi/L)	13	1.7*	+/-2.5	-1.6*	+/-3.3	0.23	0.30	0.0047	2.9E-03
Cesium-137 (pCi/L)	13	2.8*	+/-2.3	-1.4*	+/-2.5	0.71	0.35	0.024	8.7E-03
Neptunium-237 (pCi/L)	13	3.7*	+/-3.1	-21.0*	+/-0.37	-1.6	1.7	-5.2	-1.9E-02
Plutonium-238 (pCi/L)	13	15.0*	+/-0.24	-0.38*	+/-1.1	1.2	1.2	2.9	1.4E-02
Plutonium-239/240 (pCi/L)	13	0.35*	+/-0.75	-1.7*	+/-0.7	-0.18	0.14	-0.60	-2.2E-03
Radium-226 (pCi/L)	13	0.56	+/-0.63	-0.37*	+/-1.3	0.012	0.076	0.012	1.5E-04
Radium-228 (pCi/L)	13	3.9	+/-1.5	-1.1*	+/-0.84	0.47	0.37	0.47	5.8E-03
Strontium-89/90 (pCi/L)	13	2.3	+/-1.1	-2.3*	+/-1.9	0.51	0.32	0.051	6.3E-03
Total Radium Alpha (pCi/L)	13	1.9	+/-0.44	-0.19*	+/-0.15	0.29	0.15	e	3.5E-03
Technetium-99 (pCi/L)	13	12.0*	+/-8.7	-9.0*	+/-9.1	3.2	1.7	0.0032	4.0E-02
Thorium-228 (pCi/L)	13	0.038*	+/-0.24	-0.39*	+/-12	-0.061	0.031	-0.015	-7.5E-04
Thorium-230 (pCi/L)	13	0.67*	+/-5.7	-2.8*	+/-14	-0.14	0.26	-0.046	-1.7E-03
Thorium-232 (pCi/L)	13	0.023*	+/-0.11	-0.63*	+/-2.9	-0.081	0.049	-0.16	-9.9E-04
Tritium (pCi/L)	13	1300.0	+/-560	-510.0*	+/-520	154.3	120.8	0.0077	1.90E+00
Uranium-234 (pCi/L)	13	3.7*	+/-2.6	0.083*	+/-0.076	1.5	0.33	0.31	1.9E-02
Uranium-235 (pCi/L)	13	1.7	+/-0.52	-0.12*	+/-0.67	0.19	0.13	0.032	2.3E-03
Uranium-236 (pCi/L)	13	0.028*	+/-0.089	-0.041*	+/-0.1	-0.0017	0.0058	-0.0003	-2.1E-05
Uranium-238 (pCi/L)	13	11.0	+/-1.6	0.28	+/-0.059	3.6	0.81	0.60	4.4E-02

(e) Not applicable
* Provisional Result

4.25. Y-12 Complex Discharge Point S06, INSTREAM BEAR CREEK

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	2	0.123	0.019	0.071	d	0
pH, Standard Unit	2	7.5	7.4	d	9/ 6(e)	0
Silver	2	<0.0002	<0.0002	<0.0002	d	0
Aluminum	2	0.892	0.328	0.610	d	0
Arsenic	2	<0.002	<0.002	<0.002	d	0
Boron	2	0.17	0.113	0.14	d	0
Barium	2	0.325	0.238	0.282	d	0
Beryllium	2	<0.0002	<0.0002	<0.0002	d	0
Cadmium	2	0.0072	0.0032	0.0052	d	0
Cobalt	2	0.0033	0.0014	0.0023	d	0
Chromium	2	<0.001	<0.001	<0.001	d	0
Copper	2	<0.002	<0.002	<0.002	d	0
Lithium	2	0.034	0.0257	0.030	d	0
Magnesium	2	27.9	19.2	23.6	d	0
Molybdenum	2	0.0005	0.0004	0.0005	d	0
Nickel	2	0.0278	0.0129	0.0204	d	0
Nitrate/Nitrite as Nitrogen	2	83.5	52.8	68.2	d	0
Lead	2	0.0012	0.0003	0.0007	d	0
Antimony	2	<0.001	<0.001	<0.001	d	0
Strontium	2	0.546	0.447	0.496	d	0
Thallium	2	<0.0002	<0.0002	<0.0002	d	0
Vanadium	2	<0.02	<0.02	<0.02	d	0
Zinc	2	0.0563	0.0117	0.0340	d	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 Discharge Point S19, S19, ROGER'S QUARRY

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	1	0.194	0.194	0.194	d	0
pH, Standard Unit	1	8.2	8.2	d	9/ 6(e)	0
Silver	1	<0.0002	<0.0002	<0.0002	d	0
Aluminum	1	<0.2	<0.2	<0.2	d	0
Arsenic	1	0.0038	0.0038	0.0038	d	0
Boron	1	<0.1	<0.1	<0.1	d	0
Barium	1	0.0599	0.0599	0.0599	d	0
Beryllium	1	<0.0002	<0.0002	<0.000	d	0
Cadmium	1	<0.0002	<0.0002	<0.000	d	0
Cobalt	1	<0.0002	<0.0002	<0.000	d	0
Chromium	1	<0.001	<0.001	<0.001	d	0
Copper	1	<0.002	<0.002	<0.002	d	0
Dissolved Solids	1	152.0	152.0	152.0	d	0
Lithium	1	0.0148	0.0148	0.0148	d	0
Magnesium	1	11.0	11.0	11.0	d	0
Molybdenum	1	0.0013	0.0013	0.0013	d	0
Nickel	1	<0.002	<0.002	<0.002	d	0
Lead	1	<0.0002	<0.0002	<0.0002	d	0
Antimony	1	<0.001	<0.001	<0.001	d	0
Strontium	1	0.238	0.238	0.238	d	0
Suspended Solids	1	3.0	3.0	3.0	d	0
Thallium	1	<0.0002	<0.0002	<0.0002	d	0
Uranium	2	<0.001	0.0004	<0.0007	d	
Vanadium	1	<0.02	<0.02	<0.02	d	0
Zinc	1	0.0101	0.0101	0.0101	d	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 S19, S19, ROGER'S QUARRY

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	1	-0.91*	+/-2.2	-0.91*	+/-2.2	-0.91	e	e	-2.44E-04
Americium-241 (pCi/L)	1	-0.057*	+/-0.23	-0.057*	+/-0.23	-0.057	e	-0.19	-1.53E-05
Beta activity (pCi/L)	1	1.1*	+/-3.3	1.1*	+/-3.3	1.1	e	e	2.95E-04
Cobalt-60 (pCi/L)	1	2.1*	+/-2.7	2.1*	+/-2.7	2.1	e	0.042	5.63E-04
Cesium-137 (pCi/L)	1	0.69*	+/-2.6	0.69*	+/-2.6	0.69	e	0.023	1.85E-04
Neptunium-237 (pCi/L)	1	-0.039*	+/-0.12	-0.039*	+/-0.12	-0.039	e	-0.13	-1.05E-05
Plutonium-238 (pCi/L)	1	-0.087*	+/-0.21	-0.087*	+/-0.21	-0.087	e	-0.2175	-2.33E-05
Plutonium-239/240 (pCi/L)	1	0.28*	+/-0.72	0.28*	+/-0.72	0.28	e	0.9333	7.51E-05
Radium-226 (pCi/L)	1	0.025*	+/-0.072	0.025*	+/-0.072	0.025	e	0.025	6.70E-06
Radium-228 (pCi/L)	1	0.56*	+/-0.73	0.56*	+/-0.73	0.56	e	0.56	1.50E-04
Strontium-89/90 (pCi/L)	1	0.83*	+/-1.8	0.83*	+/-1.8	0.83	e	0.083	2.22E-04
Total Radium Alpha (pCi/L)	1	0.14*	+/-0.18	0.14*	+/-0.18	0.14	e	e	3.75E-05
Technetium-99 (pCi/L)	1	-1.0*	+/-9.3	-1.0*	+/-9.3	-1.0	e	-0.001	-2.68E-04
Thorium-228 (pCi/L)	1	-0.042*	+/-0.18	-0.042*	+/-0.18	-0.042	e	-0.0105	-1.13E-05
Thorium-230 (pCi/L)	1	0.019*	+/-0.35	0.019*	+/-0.35	0.019	e	0.0063	5.09E-06
Thorium-232 (pCi/L)	1	-0.011*	+/-0	-0.011*	+/-0	-0.011	e	-0.022	-2.95E-06
Tritium (pCi/L)	1	-160.0*	+/-530	-160.0*	+/-530	-160.0	e	-0.008	-4.29E-02
Uranium-234 (pCi/L)	1	0.02*	+/-0.023	0.02*	+/-0.023	0.02	e	0.004	5.36E-06
Uranium-235 (pCi/L)	1	0.0062*	+/-0.0088	0.0062*	+/-0.0088	0.0062	e	0.001	1.66E-06
Uranium-236 (pCi/L)	1	-0.0019*	+/-0.0087	-0.0019*	+/-0.0087	-0.0019	e	-0.0004	-5.09E-07
Uranium-238 (pCi/L)	1	0.0025*	+/-0	0.0025*	+/-0	0.0025	e	0.0004	6.70E-07

(e) Not applicable
* Provisional Result

Table 4.28. Y-12 Complex Discharge Point S24, BEAR CREEK KILOMETER 9.4

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
pH, Standard Unit	5	7.8	7.4	d	9/ 6(e)	0
Silver	5	<0.0004	<0.0002	<0.0002	d	0
Aluminum	5	1.11	0.235	0.536	d	0
Arsenic	5	<0.002	<0.002	<0.002	d	0
Boron	5	0.243	<0.1	<0.2	d	0
Barium	5	0.125	0.0691	0.101	d	0
Beryllium	5	<0.0002	<0.0002	<0.0002	d	0
Cadmium	5	<0.001	<0.0002	<0.0004	d	0
Cobalt	5	0.0005	0.0003	0.0004	d	0
Chromium	5	<0.004	<0.001	<0.002	d	0
Copper	5	0.0058	<0.002	<0.003	d	0
Mercury	7	<0.0002	0.000004	<0.0002	d	0
Lithium	5	0.0467	0.0204	0.0367	d	0
Magnesium	5	16.4	9.04	12.5	d	0
Molybdenum	5	0.0005	<0.0004	<0.0004	d	0
Total Nitrogen	5	14.0	3.23	8.91	d	0
Nickel	5	0.0029	<0.002	<0.002	d	0
Nitrate/Nitrite as Nitrogen	8	541.0	3.23	74.5	d	0
Phosphorus	5	<0.5	<0.5	<0.5	d	0
Lead	5	0.0006	<0.0002	<0.0003	d	0
PCB, Total	5	0.0005U	0.0005U	0.0005U	d	0
Antimony	5	<0.001	<0.001	<0.001	d	0
Strontium	5	0.224	0.101	0.172	d	0
Suspended Solids	5	5.0	1.2	3.2	d	0
Thallium	5	<0.0002	<0.0002	<0.0002	d	0
Uranium	9	0.128	0.0647	0.106	d	0
Vanadium	5	<0.02	<0.02	<0.02	d	0
Zinc	5	0.0197	0.0068	0.011	d	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 4.29. Y-12 Complex Discharge Point S24, BEAR CREEK KILOMETER 9.4

From: 2009/01/01 To: 2009/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	5	60.0	+/-6.5	34.0	+/-4.9	47.0	5.12	e	e
Americium-241 (pCi/L)	5	0.36*	+/-0.42	-0.094*	+/-0.35	0.10	0.077	0.35	e
Beta activity (pCi/L)	5	35.0	+/-5.5	13.0	+/-4.6	27.6	4.04	e	e
Cobalt-60 (pCi/L)	5	1.4*	+/-2.2	-2.0*	+/-2.2	-0.20	0.66	-0.0039	e
Cesium-137 (pCi/L)	5	2.0*	+/-2.3	-0.82*	+/-2.3	0.60	0.49	0.020	e
Neptunium-237 (pCi/L)	5	1.5*	+/-20.	-0.29*	+/-1.3	0.29	0.31	0.97	e
Plutonium-238 (pCi/L)	5	-0.046*	+/-2.5	-3.1*	+/-1.4	-0.69	0.60	-1.7	e
Plutonium-239/240 (pCi/L)	5	0.068*	+/-0.2	-2.5*	+/-2.4	-0.59	0.48	-2.0	e
Radium-226 (pCi/L)	5	0.93	+/-1.8	-0.74*	+/-2.3	0.11	0.27	0.11	e
Radium-228 (pCi/L)	5	1.6*	+/-0.81	0.07*	+/-0.88	0.9	0.3	0.9	e
Strontium-89/90 (pCi/L)	5	3.1*	+/-7	-0.8*	+/-1.1	1	0.7	0.1	e
Total Radium Alpha (pCi/L)	5	0.44*	+/-0.28	-0.001*	+/-0.19	0.2	0.08	e	e
Technetium-99 (pCi/L)	5	54.0	+/-9.9	20.0	+/-9.5	38.2	5.65	0.0382	e
Thorium-228 (pCi/L)	5	0.72*	+/-0.69	-0.021*	+/-0.36	0.15	0.14	0.037	e
Thorium-230 (pCi/L)	5	-0.073*	+/-9	-2.8*	+/-13	-0.76	0.51	-0.25	e
Thorium-232 (pCi/L)	5	0.016*	+/-0.11	-0.68*	+/-3.7	-0.15	0.13	-0.31	e
Tritium (pCi/L)	5	1900.0	+/-550	-560.0*	+/-540	360.0	417.0	0.018	e
Uranium-234 (pCi/L)	5	15.0	+/-2.6	6.6	+/-1.1	11	1.5	2.1	e
Uranium-235 (pCi/L)	5	1.3	+/-0.41	0.39	+/-0.24	0.80	0.15	0.13	e
Uranium-236 (pCi/L)	5	0.25	+/-0.16	0.054*	+/-0.093	0.16	0.032	0.031	e
Uranium-238 (pCi/L)	5	41.0	+/-4.7	19.0	+/-2.3	30.8	4.24	5.13	e

(e) Not applicable
* Provisional Result

Table 4.30. CONSTITUENTS DETECTED IN GROUNDWATER AT THE Y-12 COMPLEX - 2009

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
		REGIME = BC		AREA NAME =		Bear Creek Burial Grounds WMA					
1,1,1-Trichloroethane	ug/L	37	7	1200	J	19		456.2857	200		3
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	23	3	190		30		113.3333	NR		NA
1,1,2-Trichloroethane	ug/L	37	2	43		43		43.0000	5		2
1,1-Dichloroethane	ug/L	37	15	11000		3	J	2383.0000	NR		NA
1,1-Dichloroethene	ug/L	37	14	2700	J	2	J	492.1429	7		12
1,2-Dichloroethane	ug/L	33	1	24		24		24.0000	5		1
1,2-Dichloroethene	ug/L	16	7	1900	D	26		501.5714	70		4
2-Butanone	ug/L	37	2	10		9		9.5000	NR		NA
2-Methylnaphthalene	ug/kg	6	2	23000	J	280	J	11640.0000	NR		NA
Acetone	ug/L	32	3	81		8	Jz	33.0000	NR	Jz	NA
Actinium-227	pCi/L	4	1	0.18	J	0.18	J	0.1800	0.4		0
Alkalinity	mg/L	11	11	741		137		435.7273	NR		NA
Aluminum	mg/L	1	1	0.0317		0.0317		0.0317			0
Aluminum, ICAP	mg/L	14	9	16.4		0.0332		2.6484	0.2		6
Americium-241	pCi/L	4	2	0.21	J	0.16	J	0.1850	1.2		0
Arsenic	mg/L	1	0								0
Arsenic, ICAP	mg/L	14	1	0.00169	J	0.00169	J	0.0017	0.01		0
Arsenic, PMS	mg/L	13	3	0.00932		0.00556		0.0076	0.01		0
Barium	mg/L	1	1	0.062		0.062		0.0620			0
Barium, ICAP	mg/L	14	14	0.829		0.032		0.1657	2		0
Benzene	ug/L	37	10	1500	D	1	J	260.7060	5		8
Beryllium	mg/L	1	0								0
Beryllium, ICAP	mg/L	14	1	0.000542		0.000542		0.0005	0.004		0
Bicarbonate	mg/L	11	11	741		137		395.3636	NR		NA
Bis(2-ethylhexyl)phthalate	ug/L	6	3	140000	J	8.49		46816.1633	NR		NA

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Boron	mg/L	1	1	0.578	0.578	0.5780		0
Boron, ICAP	mg/L	14	12	1.07	0.107	0.5903	NR w	NA
Calcium	mg/L	1	1	0.876	0.876	0.8760		0
Calcium, ICAP	mg/L	14	14	90.7	0.862	16.0061	NR	NA
Carbon Disulfide	ug/L	30	2	3 J	3 J	3.0000	NR	NA
Carbonate	mg/L	11	5	236	22.6	88.5400	NR	NA
Chloride	mg/L	11	11	1520	1.03	316.8182	250	3
Chlorine-36	pCi/L	4	1	3.33 J	3.33 J	3.3300	2000	0
Chloroethane	ug/L	37	8	26	1 J	11.7500	NR	NA
Chloroform	ug/L	37	3	2 J	1 J	1.6667	80	0
Chromium	mg/L	1	1	0.000289 J	0.000289 J	0.0003		0
Chromium, ICAP	mg/L	14	3	0.0028	0.000323 J	0.0012	0.1	0
Chromium, PMS	mg/L	13	5	0.0163	0.0106	0.0141	0.1	0
cis-1,2-Dichloroethene	ug/L	37	16	2730 D	2 J	587.3125	70	9
Curium-245	pCi/L	4	1	0.28 J	0.28 J	0.2800	1.2	0
Curium-246	pCi/L	4	1	0.28 J	0.28 J	0.2800	1.2	0
Dichlorodifluoromethane	ug/L	23	3	16	3 J	7.3333	NR	NA
Ethyl Benzene	ug/L	37	5	11	1 J	4.4000	700	0
Flouride	mg/L	11	11	6.68	0.118	3.0797		0
Gross Alpha Activity	pCi/L	13	3	41	5.4	26.8000	15	2
Gross Beta Activity	pCi/L	13	4	54	4.48	25.1200	50	1
Iron	mg/L	1	1	0.0561	0.0561	0.0561		0
Iron, ICAP	mg/L	14	13	21	0.0207	1.9865	0.3	4
Lead	mg/L	1	0					0
Lead, ICAP	mg/L	14	0				0.015	0
Lead, PMS	mg/L	13	10	0.0182	0.000585	0.0031	0.015	1
Lithium	mg/L	1	1	0.0857	0.0857	0.0857		0
Lithium, ICAP	mg/L	14	14	0.617	0.012	0.1938	NR w	NA
Magnesium	mg/L	1	1	0.27	0.27	0.2700		0
Magnesium, ICAP	mg/L	14	13	21.9	0.215	4.7532	NR	NA
Manganese	mg/L	1	1	0.00105 J	0.00105 J	0.0011		0
Manganese, ICAP	mg/L	14	7	2.61	0.00076 J	0.3900	0.05	2
Methylene chloride	ug/L	37	2	29	3 J	16.0000	5	1
Molybdenum	mg/L	1	1	0.00119 J	0.00119 J	0.0012		0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Molybdenum, ICAP	mg/L	14	5	0.0238		0.00109	J	0.0105	NR		NA
Molybdenum, PMS	mg/L	6	3	0.00729		0.00357		0.0051		z	0
Naphthalene	ug/L	7	3	90000	J	20		30063.3333	NR	z	NA
Nickel	mg/L	1	0								0
Nickel, ICAP	mg/L	14	2	0.073		0.00204	J	0.0375	0.1	z	0
Nickel, PMS	mg/L	13	3	0.0763		0.00769		0.0333	0.1		0
Nitrate as Nitrogen	mg/L	11	1	11.4		11.4		11.4000	10		1
Nitrate/Nitrite as Nitrogen	mg/L	11	1	11.4		11.4		11.4000	10		1
Nitrite as Nitrogen	mg/L	11	1	0.052		0.052		0.0520			0
PCB-1242	ug/g	6	1	8	J	8	J	8.0000			0
PCB-1254	ug/g	6	2	12000		46		6023.0000	0.5		2
Phosphorus	mg/L	1	1	0.046		0.046		0.0460			0
Phosphorus, ICAP	mg/L	14	5	0.752		0.0455		0.2973	NR	wz	NA
Plutonium-242	pCi/L	4	1	0.2	J	0.2	J	0.2000	1.2		0
Polychlorinated biphenyl	ug/g	2	2	12000		54	J	6027.0000			0
Potassium	mg/L	1	1	1.56		1.56		1.5600			0
Potassium, ICAP	mg/L	14	13	8		1.55		3.8385	NR		NA
Radium-226	pCi/L	4	2	0.48		0.25	J	0.3650	4		0
Selenium	mg/L	1	0								0
Selenium, ICAP	mg/L	14	0						0.05		0
Selenium, PMS	mg/L	13	1	0.0231		0.0231		0.0231	0.05		0
Sodium	mg/L	1	1	197		197		197.0000			0
Sodium, ICAP	mg/L	14	14	1230		11.3		359.5929	NR	k	NA
Strontium	mg/L	1	1	0.0932		0.0932		0.0932			0
Strontium, ICAP	mg/L	14	14	2.06		0.0735		0.3906	NR	w	NA
Sulfate	mg/L	11	11	79.6		4.02		28.2027	250		0
Technetium-99	pCi/L	6	2	8.21		3.08	J	5.6450	900		0
Tetrachloroethene	ug/L	39	17	6900000	JN	2	J	438196.7059	5		15
Thallium	mg/L	1	0						0.002		0
Thallium, ICAP	mg/L	14	1	0.00108	J	0.00108	J	0.0011	0.002		0
Thallium, PMS	mg/L	13	0						0.002		0
Thorium-227	pCi/L	4	1	0.18	J	0.18	J	0.1800	160		0
Thorium-230	pCi/L	4	2	0.27		0.22	J	0.2450	12		0
Thorium-234	pCi/L	4	2	0.17	J	0.13	J	0.1500	400		0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Titanium	mg/L	1	1	0.000432	J	0.000432	J	0.0004			0
Titanium, ICAP	mg/L	14	5	0.66		0.00082	J	0.1722	NR	wz	NA
Toluene	ug/L	37	6	32		3	J	19.6667	1000		0
Total Dissolved Solids	mg/L	18	18	3020		66		708.5000	500		7
Total Suspended Solids	mg/L	19	10	272		1		31.9000	NR		NA
Total Xylene	ug/L	36	6	43		4	J	16.5000	10000		0
trans-1,2-Dichloroethene	ug/L	33	9	74		1	J	21.9556	100		0
Trichloroethene	ug/L	37	17	24000		2	J	4904.0588	5		14
Uranium	mg/L	1	1	0.000515	J	0.000515	J	0.0005	0.03		0
Uranium, ICAP	mg/L	13	0						0.03		0
Uranium, KPA	mg/L	3	2	0.000406	J	0.00019	J	0.0003	0.03		0
Uranium, PMS	mg/L	23	5	0.014		0.000605		0.0035	0.03		0
Uranium-233/234	pCi/L	6	4	0.61		0.33	J	0.4550	20		0
Uranium-235/236	pCi/L	6	1	0.258		0.258		0.2580	20		0
Uranium-238	pCi/L	6	2	0.17	J	0.13	J	0.1500	24		0
Vanadium	mg/L	1	0								0
Vanadium, ICAP	mg/L	14	1	0.00042	J	0.00042	J	0.0004	NR		NA
Vinyl Chloride	ug/L	37	13	320	D	2		130.6923	2		12
Zinc	mg/L	1	1	0.00283	J	0.00283	J	0.0028			0
Zinc, ICAP	mg/L	14	9	0.321		0.00188	J	0.1245	5		0

REGIME = BC AREA NAME = EMWMF

Actinium-227	pCi/L	49	1	0.23	J	0.23	J	0.2300	0.4		0
Aluminum	mg/L	13	13	26.2		0.0153	J	2.8077			0
Aluminum, ICAP	mg/L	36	36	4.63		0.00884	J	0.6123	0.2		14
Americium-241	pCi/L	49	1	0.15	J	0.15	J	0.1500	1.2		0
Americium-243	pCi/L	49	4	1.36		0.26	J	0.5725	1.2		1
Arsenic	mg/L	13	3	0.00539		0.00151	J	0.0028			0
Arsenic, ICAP	mg/L	36	5	0.00286		0.00155	J	0.0019	0.01		0
Barium	mg/L	13	13	0.709		0.0912		0.2590			0
Barium, ICAP	mg/L	36	36	0.695		0.0824		0.2275	2		0
Beryllium	mg/L	13	2	0.0011		0.000213	J	0.0007			0
Beryllium, ICAP	mg/L	36	5	0.000211	J	0.00008	J	0.0001	0.004		0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Bis(2-ethylhexyl)phthalate	ug/L	49	7	31	3.22 J	11.4514	NR	NA
Boron	mg/L	13	13	0.193	0.0063	0.0363		0
Boron, ICAP	mg/L	36	36	0.273	0.00607	0.0422	NR	NA
Cadmium	mg/L	13	10	0.000211 J	0.000106 J	0.0001	0.005	0
Cadmium, ICAP	mg/L	36	11	0.000205 J	0.000105 J	0.0001	0.005	0
Calcium	mg/L	13	13	70.2	2.18	44.6908		0
Calcium, ICAP	mg/L	36	36	83.4	2.07	43.7575	NR	NA
Cesium-137	pCi/L	49	1	4.78 J	4.78 J	4.7800	120	0
Chlorine-36	pCi/L	49	3	6.51	2.86 J	4.2167	2000	0
Chromium	mg/L	13	13	0.124	0.000393 J	0.0114		0
Chromium, ICAP	mg/L	36	29	0.0205	0.000284 J	0.0030	0.1	0
Cobalt	mg/L	13	3	0.0122	0.000301 J	0.0052		0
Cobalt, ICAP	mg/L	36	9	0.00256	0.00013 J	0.0009	NR	NA
Copper	mg/L	13	4	0.045	0.00124 J	0.0150		0
Copper, ICAP	mg/L	36	9	0.0187	0.00125 J	0.0072	1.3	0
Curium-245	pCi/L	49	5	1.52	0.23 J	0.6880	1.2	1
Curium-246	pCi/L	49	5	1.52	0.23 J	0.6880	1.2	1
Curium-247	pCi/L	49	1	0.3 J	0.3 J	0.3000	1.2	0
Heptachlor	ug/L	49	1	0.02 J	0.02 J	0.0200		0
Iron	mg/L	13	13	19.3	0.0159 J	2.1570		0
Iron, ICAP	mg/L	36	35	3.63	0.0304	0.5617	0.3	11
Lead	mg/L	13	12	0.0218	0.0011 J	0.0038		0
Lead, ICAP	mg/L	36	10	0.00534	0.00102 J	0.0023	0.015	0
Lithium	mg/L	13	13	0.062	0.00486 J	0.0219		0
Lithium, ICAP	mg/L	36	36	0.0612	0.00411 J	0.0198	NR	NA
Magnesium	mg/L	13	13	14.5	1	8.1800		0
Magnesium, ICAP	mg/L	36	36	15.1	0.957	7.8342	NR	NA
Manganese	mg/L	13	13	0.517	0.00538	0.0924		0
Manganese, ICAP	mg/L	36	36	0.404	0.00198 J	0.0472	0.05	8
Molybdenum	mg/L	13	9	0.0116	0.000287 J	0.0018		0
Molybdenum, ICAP	mg/L	36	25	0.00856	0.00027 J	0.0013	NR	NA
Nickel	mg/L	13	10	0.0919	0.000318 J	0.0113		0
Nickel, ICAP	mg/L	36	24	0.0171	0.000502 J	0.0040	0.1	0
Nickel-63	pCi/L	49	1	147	147	147.0000	12000	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Phosphorus	mg/L	13	12	0.758	0.00602 J	0.1084		0
Phosphorus, ICAP	mg/L	36	36	0.504	0.00424 J	0.0495	NR	NA
Plutonium-242	pCi/L	49	1	0.36	0.36	0.3600	1.2	0
Potassium	mg/L	13	13	6.96	0.784	2.3798		0
Potassium, ICAP	mg/L	36	36	5.62	0.77	2.0868	NR	NA
Potassium-40	pCi/L	49	1	113 J	113 J	113.0000	280	0
Pu-239/240	pCi/L	36	1	0.19 J	0.19 J	0.1900	1.2	0
Radium-226	pCi/L	49	27	0.51	0.13 J	0.2359	4	0
Radium-228	pCi/L	49	8	1.34	0.63 J	0.8388	5	0
Selenium	mg/L	13	0					0
Selenium, ICAP	mg/L	36	3	0.00137 J	0.0013 J	0.0013	0.05	0
Silver	mg/L	13	1	0.0041	0.0041	0.0041		0
Silver, ICAP	mg/L	36	3	0.00089 J	0.000673 J	0.0008	0.1	0
Sodium	mg/L	13	13	131	1.96	19.3631		0
Sodium, ICAP	mg/L	36	36	163	2.05	22.0678	NR	NA
Strontium	mg/L	13	13	1.13	0.0493	0.3951		0
Strontium, ICAP	mg/L	36	36	1.14	0.0471	0.4140	NR	NA
Strontium-90	pCi/L	49	18	4.7	1.34 J	2.1094	8	0
Technetium-99	pCi/L	49	9	3.1 J	3.01 J	3.0611	900	0
Thallium	mg/L	13	0				0.002	0
Thallium, ICAP	mg/L	36	4	0.00101 J	0.000698 J	0.0009	0.002	0
Thorium-227	pCi/L	49	1	0.23 J	0.23 J	0.2300	160	0
Thorium-228	pCi/L	49	1	0.44 J	0.44 J	0.4400	16	0
Thorium-229	pCi/L	49	1	0.85 J	0.85 J	0.8500	1.6	0
Thorium-230	pCi/L	49	19	0.46 J	0.12 J	0.2358	12	0
Thorium-232	pCi/L	49	2	0.49 J	0.18 J	0.3350	2	0
Thorium-234	pCi/L	49	13	0.45	0.12 J	0.2423	400	0
Tin	mg/L	13	1	0.00198 J	0.00198 J	0.0020		0
Tin, ICAP	mg/L	36	7	0.000676 J	0.0003 J	0.0004	NR	NA
Titanium	mg/L	13	13	0.173	0.000391 J	0.0285		0
Titanium, ICAP	mg/L	36	35	0.0466	0.00051 J	0.0075	NR	NA
Tritium	pCi/L	49	1	403 J	403 J	403.0000	20000	0
Uranium	mg/L	13	11	0.00165	0.000027 J	0.0004	0.03	0
Uranium, ICAP	mg/L	24	0				0.03	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Uranium, KPA	mg/L	36	24	0.00492	0.000022 J	0.0006	0.03	0
Uranium-232	pCi/L	49	1	1.69	1.69	1.6900	4	0
Uranium-233/234	pCi/L	49	27	0.6	0.12 J	0.2837	20	0
Uranium-235/236	pCi/L	49	3	0.18 J	0.17 J	0.1733	20	0
Uranium-238	pCi/L	49	13	0.45	0.12 J	0.2423	24	0
Vanadium	mg/L	13	13	0.0356	0.00156 J	0.0082		0
Vanadium, ICAP	mg/L	36	36	0.0175	0.00178 J	0.0053	NR	NA
Yttrium-90	pCi/L	49	18	4.7	1.34 J	2.1094	400	0
Zinc	mg/L	13	8	0.0653	0.00209 J	0.0118		0
Zinc, ICAP	mg/L	36	30	0.0167	0.0016 J	0.0042	5	0

REGIME = BC **AREA NAME = Exit Pathway - Traverse A**

Barium, ICAP	mg/L	4	4	0.116	0.0975	0.1028	2	0
Bicarbonate	mg/L	4	4	218	186	204.0000	NR	NA
Boron, ICAP	mg/L	4	4	0.0356	0.0166	0.0271	NR	NA
Cadmium, ICAP	mg/L	4	1	0.000147	0.000147	0.0001	0.005	0
Calcium, ICAP	mg/L	4	4	67.8	50.6	58.6500	NR	NA
Chloride	mg/L	4	4	18	7.42	12.8800	250	0
Chromium, ICAP	mg/L	4	1	0.0179	0.0179	0.0179	0.1	0
Flouride	mg/L	4	4	0.208	0.128	0.1665		0
Gross Alpha Activity	pCi/L	4	4	9.05	3.64	5.9300	15	0
Gross Beta Activity	pCi/L	4	4	24.3	10.1	16.8750	50	0
Iron, ICAP	mg/L	4	3	0.113	0.019	0.0714	0.3	0
Lithium, ICAP	mg/L	4	2	0.0269	0.0265	0.0267	NR	NA
Magnesium, ICAP	mg/L	4	4	21.4	17.8	18.8500	NR	NA
Manganese, ICAP	mg/L	4	2	0.0508	0.042	0.0464	0.05	1
Mercury	mg/L	4	4	0.000006	0	0.0000		0
Nitrate/Nitrite	mg/L	4	3	2.3	0.7	1.7000	10	0
Potassium, ICAP	mg/L	4	4	5.25	1.08	3.0475	NR	NA
Sodium, ICAP	mg/L	4	4	7.2	3.74	5.7625	NR	NA
Strontium, ICAP	mg/L	4	4	0.185	0.112	0.1520	NR	NA
Sulfate	mg/L	4	4	21.9	15.6	18.1500	250	0
Technetium-99	pCi/L	4	4	21.1	7.82	15.4800	900	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Total Dissolved Solids	mg/L	4	4	482	247	319.5000	500	0
Uranium, PMS	mg/L	2	2	0.02	0.016	0.0180	0.03	0
Uranium-233/234	pCi/L	4	4	5.87	2.93	4.3900	20	0
Uranium-235/236	pCi/L	4	2	0.528	0.188	0.3580	20	0
Uranium-238	pCi/L	4	4	7.47	6.15	6.9950	24	0
Vanadium, ICAP	mg/L	4	1	0.0132	0.0132	0.0132	NR	NA

REGIME = BC **AREA NAME = Exit Pathway - Traverse B**

1,1-Dichloroethene	ug/L	5	3	3.51	1.22 J	2.6500	7	0
1,2-Dichloroethene	ug/L	1	1	9	9	9.0000	70	0
Alkalinity	mg/L	1	1	238	238	238.0000	NR	NA
Aluminum, ICAP	mg/L	5	1	0.0523	0.0523	0.0523	0.2	0
Barium, ICAP	mg/L	5	5	0.158	0.0644	0.1187	2	0
Bicarbonate	mg/L	5	5	285	167	227.0000	NR	NA
Boron, ICAP	mg/L	5	4	0.114	0.0543	0.0817	NR	NA
Calcium, ICAP	mg/L	5	5	115	37.6	80.5800	NR	NA
Chloride	mg/L	5	5	52.7	25	38.5200	250	0
cis-1,2-Dichloroethene	ug/L	5	5	28.6	3.62 J	11.9100	70	0
Flouride	mg/L	5	5	0.28	0.162	0.2330		0
Gross Alpha Activity	pCi/L	5	5	18.1	3.69	10.1880	15	2
Gross Beta Activity	pCi/L	5	5	51.2	20.1	34.7000	50	1
Iron, ICAP	mg/L	5	5	9.3	0.127	3.0904	0.3	4
Lithium, ICAP	mg/L	5	5	0.03	0.0143	0.0200	NR w	NA
Magnesium, ICAP	mg/L	5	5	32.3	20.2	26.3800	NR	NA
Manganese, ICAP	mg/L	5	4	0.0681	0.0109	0.0377	0.05	1
Nitrate as Nitrogen	mg/L	1	1	0.509	0.509	0.5090	10	0
Nitrate/Nitrite	mg/L	4	4	21.4	3.7	11.4500	10	2
Nitrate/Nitrite as Nitrogen	mg/L	1	1	0.552	0.552	0.5520	10	0
Potassium, ICAP	mg/L	5	5	15	2.99	7.5800	NR	NA
Sodium, ICAP	mg/L	5	5	22.5	13.7	17.5400	NR	NA
Strontium, ICAP	mg/L	5	5	0.398	0.152	0.3020	NR w	NA
Sulfate	mg/L	5	5	31.2	24.4	27.1000	250	0
Technetium-99	pCi/L	4	4	76	7.91	39.8275	900	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Total Dissolved Solids	mg/L	5	5	522	328	408.4000	500	1
Total Suspended Solids	mg/L	5	3	16	1	9.3333	NR	NA
Trichloroethene	ug/L	5	5	40	8.04	18.9280	5	5
Uranium, ICAP	mg/L	1	0				0.03	0
Uranium, PMS	mg/L	5	5	0.066	0.0071	0.0316	0.03	2
Uranium-233/234	pCi/L	4	4	12	1.77	7.2450	20	0
Uranium-235/236	pCi/L	4	2	0.994	0.659	0.8265	20	0
Uranium-238	pCi/L	4	4	24.2	2.81	12.6275	24	1
Vanadium, ICAP	mg/L	5	2	0.0139	0.0129	0.0134	NR	NA
Zinc, ICAP	mg/L	5	1	0.0132	0.0132	0.0132	5	0

REGIME = BC **AREA NAME = Exit Pathway - Traverse C**

1,2-Dichloroethene	ug/L	3	1	2 J	2 J	2.0000	70	0
Alkalinity	mg/L	2	2	337	336	336.5000	NR	NA
Barium, ICAP	mg/L	2	2	0.208	0.065	0.1365	2	0
Bicarbonate	mg/L	2	2	337	336	336.5000	NR	NA
Calcium, ICAP	mg/L	2	2	149	139	144.0000	NR	NA
Chloride	mg/L	3	3	66.7	22.9	51.2667	250	0
cis-1,2-Dichloroethene	ug/L	4	2	3 J	2 J	2.5000	70	0
Flouride	mg/L	2	1	0.241	0.241	0.2410		0
Gross Alpha Activity	pCi/L	2	1	5.7	5.7	5.7000	15	0
Gross Beta Activity	pCi/L	2	2	37	22	29.5000	50	0
Iron, ICAP	mg/L	2	1	0.492	0.492	0.4920	0.3	1
Lead, ICAP	mg/L	2	0				0.015	0
Lead, PMS	mg/L	2	1	0.00409	0.00409	0.0041	0.015	0
Magnesium, ICAP	mg/L	2	2	23.9	23.6	23.7500	NR	NA
Manganese, ICAP	mg/L	2	2	0.853	0.0212	0.4371	0.05	1
Nitrate as Nitrogen	mg/L	3	3	12.9	0.315	8.6383	10	2
Nitrate/Nitrite as Nitrogen	mg/L	3	3	12.9	0.359	8.6863	10	2
Potassium, ICAP	mg/L	2	2	3.1	3.05	3.0750	NR	NA
Sodium, ICAP	mg/L	2	2	28.3	10.6	19.4500	NR	NA
Strontium, ICAP	mg/L	2	2	0.353	0.156	0.2545	NR w	NA
Sulfate	mg/L	3	3	38.2	32.3	34.9000	250	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Tetrachloroethene	ug/L	4	2	3 J	2 J	2.5000	5	0
Total Dissolved Solids	mg/L	2	2	560	458	509.0000	500	1
Total Suspended Solids	mg/L	2	1	2	2	2.0000	NR	NA
Trichloroethene	ug/L	4	4	90	10	36.7500	5	4
Uranium, ICAP	mg/L	2	0				0.03	0
Uranium, PMS	mg/L	2	2	0.0114	0.00324	0.0073	0.03	0
REGIME = BC				**AREA NAME = Exit Pathway - Traverse W**				
Barium, ICAP	mg/L	6	6	0.086	0.014	0.0466	2	0
Boron, ICAP	mg/L	6	6	0.064	0.0403	0.0523	NR	NA
Calcium, ICAP	mg/L	6	6	63	16	45.1000	NR	NA
Iron, ICAP	mg/L	6	6	2.4	0.21	1.1795	0.3	4
Lithium, ICAP	mg/L	6	4	0.016	0.01	0.0138	NR	NA
Magnesium, ICAP	mg/L	6	6	30.9	24.2	28.1500	NR	NA
Manganese, ICAP	mg/L	6	6	0.144	0.022	0.0652	0.05	4
Nitrate/Nitrite	mg/L	3	3	0.24	0.028	0.1067	10	0
Nitrate/Nitrite as Nitrogen	mg/L	3	2	0.34	0.01	0.1750	10	0
Potassium, ICAP	mg/L	6	6	3	1.5	2.2117	NR	NA
Sodium, ICAP	mg/L	6	6	12.2	5.8	8.7000	NR	NA
Strontium, ICAP	mg/L	6	6	1.29	0.29	0.5373	NR	NA
Uranium-233/234	pCi/L	6	3	1.1	0.373	0.7713	20	0
Uranium-238	pCi/L	6	2	0.747	0.355	0.5510	24	0
Zinc, ICAP	mg/L	6	1	0.014	0.014	0.0140	5	0
REGIME = BC				**AREA NAME = Exit Pathway Spring/Surface Water**				
1,2-Dichloroethene	ug/L	2	1	3 J	3 J	3.0000	70	0
Alkalinity	mg/L	2	2	239	205	222.0000	NR	NA
Alkalinity as CaCO3	mg/L	5	3	170	120	143.3333		0
Aluminum, ICAP	mg/L	7	5	0.241	0.0563	0.1111	0.2	1
Barium, ICAP	mg/L	7	7	0.129	0.038	0.0705	2	0
Bicarbonate	mg/L	5	5	239	120	174.8000	NR	NA
Bis(2-ethylhexyl)phthalate	ug/L	3	2	0.12	0.054 J	0.0870	NR	NA

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Boron, ICAP	mg/L	4	1	0.0194	0.0194	0.0194	NR	NA
Boron, PMS	mg/L	3	1	0.0203	0.0203	0.0203		0
Cadmium, ICAP	mg/L	3	1	0.00015	0.00015	0.0002	0.005	0
Cadmium, PMS	mg/L	6	0				0.005	0
Calcium, ICAP	mg/L	7	7	95	29.3	52.5571	NR k	NA
Chloride	mg/L	5	5	37.2	4.2	13.7400	250	0
cis-1,2-Dichloroethene	ug/L	7	1	3 J	3 J	3.0000	70	0
Flouride	mg/L	5	2	0.324	0.14	0.2320		0
Gross Alpha Activity	pCi/L	4	4	42	2.67	16.2150	15	2
Gross Beta Activity	pCi/L	4	4	33	3.64	13.4600	50	0
Iron, ICAP	mg/L	7	7	0.442	0.0361	0.1546	0.3	1
Lithium, ICAP	mg/L	7	1	0.0117	0.0117	0.0117	NR w	NA
Magnesium, ICAP	mg/L	7	7	19	9.46	15.3086	NR k	NA
Manganese, ICAP	mg/L	7	6	0.108	0.0057	0.0297	0.05	1
Mercury	mg/L	7	7	0.000016	0	0.0000		0
Mercury, CVAA	mg/L	2	0				0.002	0
Methylmercury	mg/L	4	1	0	0	0.0000		0
Nitrate as Nitrogen	mg/L	2	2	15.3	2.78	9.0400	10	1
Nitrate/Nitrite	mg/L	1	1	0.68	0.68	0.6800	10	0
Nitrate/Nitrite as Nitrogen	mg/L	6	6	15.3	0.064	3.3957	10	1
Octachloro-dibenzo[b,e][1,4]dioxin	pg/L	3	3	5.35 J	4.03 J	4.5667		0
Octachlorodibenzofuran	pg/L	3	1	0.364 J	0.364 J	0.3640		0
Potassium, ICAP	mg/L	7	6	2.67	0.676	1.1438	NR	NA
Silicon, ICAP	mg/L	5	5	4.61	3.57	3.9820	NR ewz	NA
Sodium, ICAP	mg/L	7	7	25.4	2.67	7.4286	NR k	NA
Strontium, ICAP	mg/L	7	7	0.246	0.0274	0.0927	NR w	NA
Sulfate	mg/L	5	5	26.3	2.9	12.9000	250	0
Total Dissolved Solids	mg/L	5	5	402	130	213.4000	500	0
Total Suspended Solids	mg/L	5	2	8	4	6.0000	NR	NA
Trichloroethene	ug/L	7	1	3 J	3 J	3.0000	5	0
Uranium, ICAP	mg/L	2	0				0.03	0
Uranium, PMS	mg/L	7	5	0.0801	0.0057	0.0264	0.03	1
Uranium-233/234	pCi/L	4	4	2.23	0.55	1.2585	20	0
Uranium-238	pCi/L	4	3	2.42	0.183	1.5343	24	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME = BC				**AREA NAME = Industrial Landfill I**				
1,1-Dichloroethane	ug/L	1	1	3 J	3 J	3.0000	NR	NA
1,1-Dichloroethene	ug/L	1	1	14	14	14.0000	7	1
cis-1,2-Dichloroethene	ug/L	1	1	40	40	40.0000	70	0
Trichloroethene	ug/L	1	1	14	14	14.0000	5	1
REGIME = BC				**AREA NAME = Maynardville exit pathway**				
Alkalinity as CaCO3	mg/L	1	1	140	140	140.0000		0
Aluminum, ICAP	mg/L	1	1	0.152	0.152	0.1520	0.2	0
Barium, ICAP	mg/L	1	1	0.0572	0.0572	0.0572	2	0
Bicarbonate	mg/L	1	1	140	140	140.0000	NR	NA
Calcium, ICAP	mg/L	1	1	31.1	31.1	31.1000	NR	NA
Chloride	mg/L	1	1	2.1	2.1	2.1000	250	0
Iron, ICAP	mg/L	1	1	0.208	0.208	0.2080	0.3	0
Magnesium, ICAP	mg/L	1	1	14.2	14.2	14.2000	NR	NA
Manganese, ICAP	mg/L	1	1	0.0231	0.0231	0.0231	0.05	0
Mercury	mg/L	1	1	0.000002	0.000002	0.0000		0
Nitrate/Nitrite as Nitrogen	mg/L	1	1	0.1	0.1	0.1000	10	0
Potassium, ICAP	mg/L	1	1	0.521	0.521	0.5210	NR	NA
Silicon, ICAP	mg/L	1	1	3.76	3.76	3.7600	NR	NA
Sodium, ICAP	mg/L	1	1	1.33	1.33	1.3300	NR	NA
Strontium, ICAP	mg/L	1	1	0.0362	0.0362	0.0362	NR	NA
Sulfate	mg/L	1	1	5.3	5.3	5.3000	250	0
Total Dissolved Solids	mg/L	1	1	140	140	140.0000	500	0
Total Suspended Solids	mg/L	1	1	22	22	22.0000	NR	NA
Uranium-233/234	pCi/L	1	1	0.54	0.54	0.5400	20	0
Uranium-238	pCi/L	1	1	0.475	0.475	0.4750	24	0
REGIME = BC				**AREA NAME = Oil Landfarm WMA**				
1,1,1-Trichloroethane	ug/L	12	1	5	5	5.0000	200	0
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	6	1	42	42	42.0000	NR	NA

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
1,1-Dichloroethane	ug/L	12	3	13	9	11.3667	NR	NA
1,1-Dichloroethene	ug/L	12	5	42	2 J	11.4560	7	1
1,2-Dichloroethene	ug/L	5	2	340 D	2 J	171.0000	70	1
1,2-Dichloropropane	ug/L	8	2	1.16 J	1.1	1.1300	5	0
1,4-Dichlorobenzene	ug/L	10	1	3 J	3 J	3.0000	75	0
Alkalinity	mg/L	3	3	615	207	349.6667	NR	NA
Aluminum	mg/L	1	1	0.0621	0.0621	0.0621		0
Aluminum, ICAP	mg/L	8	5	0.286	0.0176 J	0.1007	0.2	1
Americium-243	pCi/L	4	1	0.24 J	0.24 J	0.2400	1.2	0
Arsenic	mg/L	1	0					0
Arsenic, ICAP	mg/L	8	1	0.00108 J	0.00108 J	0.0011	0.01	0
Arsenic, PMS	mg/L	3	1	0.0094	0.0094	0.0094	0.01	0
Barium	mg/L	1	1	0.0465	0.0465	0.0465		0
Barium, ICAP	mg/L	8	8	1.36	0.0174	0.2170	2	0
Benzene	ug/L	12	3	13	1	5.0300	5	1
Bicarbonate	mg/L	3	3	615	207	349.6667	NR	NA
Boron	mg/L	1	1	0.285	0.285	0.2850		0
Boron, ICAP	mg/L	8	4	3.44	0.314	1.0958	NR w	NA
Calcium	mg/L	1	1	1.21	1.21	1.2100		0
Calcium, ICAP	mg/L	8	8	197	1.15	47.3475	NR k	NA
Carbon Tetrachloride	ug/L	12	1	4 J	4 J	4.0000	5	0
Chloride	mg/L	7	7	127	0.611	47.4557	250	0
Chlorine-36	pCi/L	4	1	4.19 J	4.19 J	4.1900	2000	0
Chlorobenzene	ug/L	12	1	13	13	13.0000	100	0
Chloroform	ug/L	12	1	2 J	2 J	2.0000	80	0
Chromium	mg/L	1	1	0.00101 J	0.00101 J	0.0010		0
Chromium, ICAP	mg/L	8	3	0.00166 J	0.000253 J	0.0009	0.1	0
Chromium, PMS	mg/L	3	0				0.1	0
cis-1,2-Dichloroethene	ug/L	12	5	340 D	2 J	78.2200	70	1
Cobalt	mg/L	1	0					0
Cobalt, ICAP	mg/L	8	2	0.03	0.0274	0.0287	NR	NA
Curium-245	pCi/L	4	2	0.24 J	0.12 J	0.1800	1.2	0
Curium-246	pCi/L	4	2	0.24 J	0.12 J	0.1800	1.2	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Flouride	mg/L	3	3	0.128	0.107	0.1183		0
Gross Alpha Activity	pCi/L	7	2	53	12	32.5000	15	1
Gross Beta Activity	pCi/L	7	4	130	7.4	58.6000	50	2
Iron	mg/L	1	1	0.236	0.236	0.2360		0
Iron, ICAP	mg/L	8	7	26.1	0.0339	5.0419	0.3	3
Lead	mg/L	1	0					0
Lead, ICAP	mg/L	8	0				0.015	0
Lead, PMS	mg/L	3	3	0.00585	0.00243	0.0039	0.015	0
Lithium	mg/L	1	1	0.0387	0.0387	0.0387		0
Lithium, ICAP	mg/L	8	4	0.123	0.0358	0.0618	NR w	NA
Magnesium	mg/L	1	1	0.486	0.486	0.4860		0
Magnesium, ICAP	mg/L	8	8	36.5	0.451	9.5054	NR k	NA
Manganese	mg/L	1	1	0.00167 J	0.00167 J	0.0017		0
Manganese, ICAP	mg/L	8	8	7.49	0.0008 J	1.6504	0.05	4
Molybdenum	mg/L	1	1	0.000382 J	0.000382 J	0.0004		0
Molybdenum, ICAP	mg/L	6	2	0.000669 J	0.00063 J	0.0006	NR	NA
Molybdenum, PMS	mg/L	1	0					0
Nickel	mg/L	1	1	0.000442 J	0.000442 J	0.0004		0
Nickel, ICAP	mg/L	8	3	0.029	0.00204 J	0.0182	0.1	0
Nickel, PMS	mg/L	3	0				0.1	0
Nitrate as Nitrogen	mg/L	7	4	397	0.313	127.8283	10	3
Nitrate/Nitrite as Nitrogen	mg/L	7	5	397	0.0568	102.2830	10	3
Phosphorus	mg/L	1	1	0.031	0.031	0.0310		0
Phosphorus, ICAP	mg/L	6	3	0.038	0.0336	0.0354	NR	NA
Potassium	mg/L	1	1	1.22	1.22	1.2200		0
Potassium, ICAP	mg/L	8	7	13.6	1.04	3.2543	NR	NA
Potassium-40	pCi/L	4	1	23.7 J	23.7 J	23.7000	280	0
Radium-226	pCi/L	4	2	0.31 J	0.17 J	0.2400	4	0
Radium-228	pCi/L	4	1	0.68 J	0.68 J	0.6800	5	0
Sodium	mg/L	1	1	101	101	101.0000		0
Sodium, ICAP	mg/L	8	8	116	1.28	52.5663	NR	NA
Strontium	mg/L	1	1	0.068	0.068	0.0680		0
Strontium, ICAP	mg/L	8	8	0.599	0.0368	0.1430	NR w	NA
Strontium-90	pCi/L	4	1	1.58 J	1.58 J	1.5800	8	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Sulfate	mg/L	7	7	75.7	5.5	26.6771	250	0
Technetium-99	pCi/L	6	3	470	3.08 J	197.6933	900	0
Tetrachloroethene	ug/L	12	3	51	1 J	27.4333	5	2
Thallium	mg/L	1	0				0.002	0
Thallium, ICAP	mg/L	7	1	0.000897 J	0.000897 J	0.0009	0.002	0
Thallium, PMS	mg/L	4	0				0.002	0
Tin	mg/L	1	0					0
Tin, ICAP	mg/L	3	2	0.000623 J	0.00048 J	0.0006	NR	NA
Titanium	mg/L	1	1	0.00112 J	0.00112 J	0.0011		0
Titanium, ICAP	mg/L	6	1	0.00128 J	0.00128 J	0.0013	NR	NA
Total Dissolved Solids	mg/L	3	3	776	204	406.3333	500	1
Total Suspended Solids	mg/L	3	2	28	2	15.0000	NR	NA
Trichloroethene	ug/L	12	6	280 D	6	65.8333	5	6
Uranium	mg/L	1	1	0.00017 J	0.00017 J	0.0002	0.03	0
Uranium, ICAP	mg/L	5	0				0.03	0
Uranium, KPA	mg/L	3	2	0.000218 J	0.000076 J	0.0001	0.03	0
Uranium, PMS	mg/L	5	3	0.143	0.00814	0.0553	0.03	1
Vanadium	mg/L	1	0					0
Vanadium, ICAP	mg/L	8	2	0.00048 J	0.00026 J	0.0004	NR	NA
Vinyl Chloride	ug/L	12	1	43	43	43.0000	2	1
Yttrium-90	pCi/L	4	1	1.58 J	1.58 J	1.5800	400	0
Zinc	mg/L	1	1	0.00356 J	0.00356 J	0.0036		0
Zinc, ICAP	mg/L	8	4	0.014	0.00169 J	0.0072	5	0

REGIME = BC **AREA NAME = Rust Spoil Area**

1,1-Dichloroethane	ug/L	3	1	1 J	1 J	1.0000	NR	NA
1,2-Dichloroethene	ug/L	3	1	2 J	2 J	2.0000	70	0
Alkalinity	mg/L	3	3	370	207	270.6667	NR	NA
Barium, ICAP	mg/L	3	3	0.202	0.0795	0.1478	2	0
Bicarbonate	mg/L	3	3	370	207	270.6667	NR	NA
Calcium, ICAP	mg/L	3	3	169	38.2	86.0667	NR k	NA
Chloride	mg/L	3	3	35.6	1.6	13.7967	250	0
cis-1,2-Dichloroethene	ug/L	3	1	2 J	2 J	2.0000	70	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE		NUMBER OF RESULTS > REF.
Flouride	mg/L	3	2	0.259	0.239	0.2490			0
Gross Alpha Activity	pCi/L	3	0				15		0
Gross Beta Activity	pCi/L	3	1	8.6	8.6	8.6000	50		0
Lithium, ICAP	mg/L	3	2	0.0251	0.0216	0.0234	NR	w	NA
Magnesium, ICAP	mg/L	3	3	30.9	16.2	24.7333	NR	k	NA
Manganese, ICAP	mg/L	3	1	0.135	0.135	0.1350	0.05		1
Nitrate as Nitrogen	mg/L	3	3	0.301	0.152	0.2023	10		0
Nitrate/Nitrite as Nitrogen	mg/L	3	2	0.334	0.188	0.2610	10		0
Potassium, ICAP	mg/L	3	1	4.04	4.04	4.0400	NR		NA
Sodium, ICAP	mg/L	3	3	12.7	0.814	5.0480	NR	k	NA
Strontium, ICAP	mg/L	3	3	0.267	0.0613	0.1339	NR	w	NA
Sulfate	mg/L	3	3	91	2.24	32.4533	250		0
Total Dissolved Solids	mg/L	3	3	541	118	280.3333	500		1
Total Suspended Solids	mg/L	3	1	2	2	2.0000	NR		NA
Trichloroethene	ug/L	3	1	12	12	12.0000	5		1
Uranium, ICAP	mg/L	3	0				0.03		0
Uranium, PMS	mg/L	3	1	0.0017	0.0017	0.0017	0.03		0

REGIME = BC **AREA NAME = S-3 Site**

1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	7	1	46	46	46.0000	NR		NA
1,1-Dichloroethene	ug/L	9	1	3 J	3 J	3.0000	7		0
Alkalinity	mg/L	7	7	455	58.7	262.6000	NR		NA
Aluminum, ICAP	mg/L	9	4	44.2	0.306	12.0165	0.2		4
Barium, ICAP	mg/L	9	9	376	0.02	42.5848	2		2
Beryllium, ICAP	mg/L	9	5	0.0272	0.000829	0.0076	0.004		2
Bicarbonate	mg/L	7	7	455	58.7	262.6000	NR		NA
Boron, ICAP	mg/L	9	3	0.49	0.0282	0.3167	NR	w	NA
Cadmium, ICAP	mg/L	8	2	0.324	0.00788	0.1659	0.005	z	2
Cadmium, PMS	mg/L	8	2	0.279	0.0068	0.1429	0.005		2
Calcium, ICAP	mg/L	9	9	9430	26	1469.3333	NR		NA
Chloride	mg/L	9	9	360	10.2	114.4556	250		2
Chloroform	ug/L	9	1	30	30	30.0000	80		0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Chromium, ICAP	mg/L	9	2	0.0491	0.00585	0.0275	0.1 z	0
Chromium, PMS	mg/L	7	1	0.0584	0.0584	0.0584	0.1	0
Cobalt, ICAP	mg/L	9	3	0.442	0.036	0.1737	NR	NA
Flouride	mg/L	7	5	1.08	0.154	0.4164		0
Gross Alpha Activity	pCi/L	10	7	400	3.5	151.0429	15	5
Gross Beta Activity	pCi/L	10	9	11000	6.8	1328.8667	50	4
Iron, ICAP	mg/L	9	5	4.48	0.0975	1.2479	0.3	2
Lead, ICAP	mg/L	9	0				0.015	0
Lead, PMS	mg/L	7	3	0.00623	0.00056	0.0033	0.015	0
Lithium, ICAP	mg/L	9	6	1.16	0.0125	0.3240	NR w	NA
Magnesium, ICAP	mg/L	9	9	2400	4.66	353.8067	NR	NA
Manganese, ICAP	mg/L	9	9	106	0.0814	15.4412	0.05	9
Mercury, CVAA	mg/L	9	2	0.000264	0.000249	0.0003	0.002	0
Methylene chloride	ug/L	9	2	15	5	10.0000	5	1
Nickel, ICAP	mg/L	9	3	4.41	0.095	1.5338	0.1 z	1
Nickel, PMS	mg/L	7	6	4.1	0.00539	0.7178	0.1	2
Nitrate as Nitrogen	mg/L	9	9	10400	0.448	1709.5387	10	8
Nitrate/Nitrite	mg/L	1	1	12.2	12.2	12.2000	10	1
Nitrate/Nitrite as Nitrogen	mg/L	10	9	10400	11	1711.0778	10	9
Nitrite as Nitrogen	mg/L	9	4	1.86	0.196	0.9495		0
Np-237	pCi/L	2	2	5.78	4.86	5.3200	1.2	2
Potassium, ICAP	mg/L	9	9	124	2.14	22.5000	NR	NA
Sodium, ICAP	mg/L	9	9	2550	7.11	365.8122	NR	NA
Strontium, ICAP	mg/L	9	9	304	0.0638	36.4052	NR w	NA
Sulfate	mg/L	9	8	76.4	2.72	30.2150	250	0
Technetium-99	pCi/L	3	2	152	150	151.0000	900	0
Tetrachloroethene	ug/L	9	3	97	6.1	36.5100	5	3
Total Dissolved Solids	mg/L	7	7	64400	486	12142.7143	500	6
Total Radium Alpha	pCi/L	2	2	0.303	0.216	0.2595	5	0
Total Suspended Solids	mg/L	7	6	11	1	3.0000	NR	NA
Trichloroethene	ug/L	9	1	1 J	1 J	1.0000	5	0
Uranium, ICAP	mg/L	7	0				0.03	0
Uranium, PMS	mg/L	9	9	1.33	0.00172	0.2861	0.03	5
Uranium-233/234	pCi/L	2	2	58.7	54.6	56.6500	20	2

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Uranium-235/236	pCi/L	2	2	6.94	6.55	6.7450	20	0
Uranium-238	pCi/L	2	2	126	122	124.0000	24	2
Zinc, ICAP	mg/L	9	4	0.114	0.025	0.0575	5	0
REGIME = CR				**AREA NAME = Chestnut Ridge Borrow Area Waste Pile**				
Alkalinity as CaCO3	mg/L	2	2	200	180	190.0000		0
Barium, ICAP	mg/L	4	4	0.0172	0.0077	0.0125	2	0
Bicarbonate	mg/L	4	4	241	180	205.2500	NR	NA
Calcium, ICAP	mg/L	4	4	39	36.5	38.0750	NR	NA
Chloride	mg/L	4	4	3	0.72	1.8825	250	0
Iron, ICAP	mg/L	4	2	2.31	2.3	2.3050	0.3	2
Magnesium, ICAP	mg/L	4	4	24.3	21.6	22.9750	NR	NA
Manganese, ICAP	mg/L	4	2	0.04	0.0257	0.0329	0.05	0
Nitrate/Nitrite	mg/L	2	2	0.069	0.03	0.0495	10	0
Nitrate/Nitrite as Nitrogen	mg/L	2	1	0.09	0.09	0.0900	10	0
Potassium, ICAP	mg/L	4	4	4.1	0.992	2.4980	NR	NA
Sodium, ICAP	mg/L	4	4	3	1.58	2.4750	NR	NA
Strontium, ICAP	mg/L	4	4	0.026	0.016	0.0210	NR	NA
Sulfate	mg/L	4	3	5.5	0.45	3.6500	250	0
Zinc, ICAP	mg/L	4	1	0.034	0.034	0.0340	5	0
REGIME = CR				**AREA NAME = Chestnut Ridge Security Pits**				
1,1,1-Trichloroethane	ug/L	11	5	20	2.7	12.2900	200	0
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	7	3	3 J	2 J	2.6667	NR	NA
1,1-Dichloroethane	ug/L	11	5	75	19	48.0000	NR	NA
1,1-Dichloroethene	ug/L	11	5	53	3.5	26.1180	7	4
Barium, ICAP	mg/L	2	2	0.019	0.0183	0.0187	2	0
Cadmium, ICAP	mg/L	1	1	0.00018	0.00018	0.0002	0.005	0
Cadmium, PMS	mg/L	1	0				0.005	0
Calcium, ICAP	mg/L	2	2	49.9	49	49.4500	NR	NA
Chromium, ICAP	mg/L	2	1	0.0144	0.0144	0.0144	0.1	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
cis-1,2-Dichloroethene	ug/L	11	1	1 J	1 J	1.0000	70	0
Gross Alpha Activity	pCi/L	2	1	2.46	2.46	2.4600	15	0
Gross Beta Activity	pCi/L	2	2	4.84	4.71	4.7750	50	0
Iron, ICAP	mg/L	2	1	0.0274	0.0274	0.0274	0.3	0
Magnesium, ICAP	mg/L	2	2	29.8	29	29.4000	NR	NA
Manganese, ICAP	mg/L	2	1	0.043	0.043	0.0430	0.05	0
Nickel, ICAP	mg/L	2	2	0.0119	0.01	0.0110	0.1	0
Potassium, ICAP	mg/L	2	2	4.18	2.8	3.4900	NR	NA
Sodium, ICAP	mg/L	2	2	1.35	1.1	1.2250	NR	NA
Strontium, ICAP	mg/L	2	2	0.0208	0.02	0.0204	NR	NA
Tetrachloroethene	ug/L	11	4	4 J	1 J	3.2500	5	0
Total Dissolved Solids	mg/L	2	2	250	241	245.5000	500	0
Trichlorofluoromethane	ug/L	7	6	32	2 J	12.8333	NR	NA
Zinc, ICAP	mg/L	2	2	0.045	0.026	0.0355	5	0
REGIME = CR				**AREA NAME = Chestnut Ridge Sediment Disposal Basin**				
Aluminum, ICAP	mg/L	4	1	0.21	0.21	0.2100	0.2	1
Barium, ICAP	mg/L	4	4	0.0316	0.00927	0.0163	2	0
Cadmium, ICAP	mg/L	4	3	0.00017	0.00015	0.0002	0.005	0
Calcium, ICAP	mg/L	4	4	68.2	27.3	43.3750	NR	NA
Iron, ICAP	mg/L	4	4	0.213	0.0216	0.0736	0.3	0
Magnesium, ICAP	mg/L	4	4	41.4	2.3	21.3750	NR	NA
Manganese, ICAP	mg/L	4	1	0.00549	0.00549	0.0055	0.05	0
Potassium, ICAP	mg/L	4	4	19.8	0.947	6.0093	NR	NA
Sodium, ICAP	mg/L	4	4	4.7	0.512	1.7020	NR	NA
Strontium, ICAP	mg/L	4	4	0.026	0.0171	0.0211	NR	NA
Total Dissolved Solids	mg/L	4	4	380	77	188.2500	500	0
Total Suspended Solids	mg/L	4	1	11	11	11.0000	NR	NA
Zinc, ICAP	mg/L	4	1	0.0111	0.0111	0.0111	5	0
REGIME = CR				**AREA NAME = Construction/Demolition Landfill VII**				
1,1,1-Trichloroethane	ug/L	8	2	2.9 J	2.4 J	2.6500	200	0
1,1-Dichloroethane	ug/L	8	2	4.7 J	4.5 J	4.6000	NR	NA

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
1,1-Dichloroethene	ug/L	8	2	8.7	6.7	7.7000	7	1
1,2-Dichloroethane	ug/L	8	2	0.12 J	0.12 J	0.1200	5	0
Acetone	ug/L	8	1	2 J	2 J	2.0000	NR	NA
Alkalinity as HCO3	mg/L	8	8	194	106	152.1250	NR	NA
Aluminum, ICAP	mg/L	8	2	1	0.52	0.7600	0.2	2
Barium, ICAP	mg/L	8	8	0.25	0.01	0.0705	2	0
Calcium, ICAP	mg/L	8	8	43.1	27.9	35.1625	NR	NA
Chloroform	ug/L	8	1	0.045 J	0.045 J	0.0450	80	0
Chloromethane	ug/L	8	2	0.35 J	0.25 J	0.3000	NR	NA
cis-1,2-Dichloroethene	ug/L	8	2	13	13	13.0000	70	0
Conductivity	umho/	8	8	361	253	305.7500	NR	NA
Iron, ICAP	mg/L	8	2	0.55	0.36	0.4550	0.3	2
Magnesium, ICAP	mg/L	8	8	22.6	12.2	17.3750	NR	NA
Manganese, ICAP	mg/L	8	1	0.01	0.01	0.0100	0.05	0
Nitrate as Nitrogen	mg/L	8	3	0.6	0.54	0.5767	10	0
pH	Std	8	8	7.9	7	7.5625	6.5/8.5	0
Sodium, ICAP	mg/L	8	2	2.3	2	2.1500	NR	NA
Strontium, ICAP	mg/L	8	8	0.053	0.016	0.0265	NR	NA
Sulfate	mg/L	8	1	11.1	11.1	11.1000	250	0
Tetrachloroethene	ug/L	8	2	15	11	13.0000	5	2
Total Dissolved Solids	mg/L	8	8	216	139	171.0000	500	0
Total Suspended Solids	mg/L	8	1	4	4	4.0000	NR	NA
trans-1,2-Dichloroethene	ug/L	8	1	0.16 J	0.16 J	0.1600	100	0
Trichloroethene	ug/L	8	2	1.3 J	1.2 J	1.2500	5	0
Trichlorofluoromethane	ug/L	8	2	22	18	20.0000	NR	NA
Turbidity	NTU	8	7	9.7	0.15	2.8414	1	3
Zinc, PMS	mg/L	8	4	0.02	0.011	0.0140		0

REGIME = CR **AREA NAME = East Chestnut Ridge Waste Pile**

Alkalinity as CaCO3	mg/L	2	2	260	250	255.0000		0
Barium, ICAP	mg/L	4	4	0.0122	0.011	0.0116	2	0
Bicarbonate	mg/L	4	4	283	250	268.0000	NR	NA

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Cadmium, ICAP	mg/L	2	2	0.00016	0.00014	0.0002	0.005	0
Cadmium, PMS	mg/L	2	0				0.005	0
Calcium, ICAP	mg/L	4	4	54.3	50.7	53.0000	NR	NA
Chloride	mg/L	4	4	7.7	2.9	5.5250	250	0
Chloromethane	ug/L	4	1	0.64 J	0.64 J	0.6400	NR	NA
Iron, ICAP	mg/L	4	2	0.0356	0.0267	0.0312	0.3	0
Magnesium, ICAP	mg/L	4	4	33	30.4	31.6000	NR	NA
Nitrate/Nitrite	mg/L	2	2	2.5	0.37	1.4350	10	0
Nitrate/Nitrite as Nitrogen	mg/L	2	2	1.6	0.21	0.9050	10	0
Potassium, ICAP	mg/L	4	4	1.31	0.87	1.0513	NR	NA
Sodium, ICAP	mg/L	4	4	4.1	1.61	3.0525	NR	NA
Strontium, ICAP	mg/L	4	4	0.025	0.0185	0.0218	NR	NA
Sulfate	mg/L	4	4	2.5	1.3	1.8500	250	0

REGIME = CR **AREA NAME = Exit Pathway Spring/Surface Water**

Alkalinity	mg/L	2	2	179	133	156.0000	NR	NA
Aluminum, ICAP	mg/L	6	4	0.31	0.088	0.1568	0.2	1
Barium, ICAP	mg/L	6	6	0.0846	0.037	0.0570	2	0
Barium, PMS	mg/L	2	2	0.0386	0.0367	0.0377	dz	0
Bicarbonate	mg/L	6	6	185	116	157.1667	NR	NA
Boron, ICAP	mg/L	6	4	0.098	0.0182	0.0557	NR	NA
Cadmium, ICAP	mg/L	6	1	0.00014	0.00014	0.0001	0.005	0
Cadmium, PMS	mg/L	2	0				0.005	0
Calcium, ICAP	mg/L	6	6	56.7	28.7	42.6667	NR	NA
Chloride	mg/L	6	6	3.1	1.7	2.2733	250	0
Flouride	mg/L	6	2	0.13	0.13	0.1300		0
Gross Alpha Activity	pCi/L	6	0				15	0
Gross Beta Activity	pCi/L	6	1	3.18	3.18	3.1800	50	0
Iron, ICAP	mg/L	6	4	0.394	0.0931	0.2088	0.3	1
Lithium, ICAP	mg/L	6	3	0.032	0.0114	0.0206	NR	NA
Magnesium, ICAP	mg/L	6	6	17.4	11.4	13.7833	NR	NA
Manganese, ICAP	mg/L	6	5	0.0628	0.00804	0.0341	0.05	1
Nickel, ICAP	mg/L	6	0				0.1	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Nickel, PMS	mg/L	2	1	0.0119	0.0119	0.0119	0.1 d	0
Nitrate as Nitrogen	mg/L	2	2	0.882	0.059	0.4705	10	0
Nitrate/Nitrite	mg/L	4	4	0.29	0.058	0.1645	10	0
Nitrate/Nitrite as Nitrogen	mg/L	2	2	0.922	0.0992	0.5106	10	0
Potassium, ICAP	mg/L	6	4	2.67	0.827	1.7293	NR	NA
Sodium, ICAP	mg/L	6	6	1.82	1.22	1.5233	NR	NA
Strontium, ICAP	mg/L	6	6	0.39	0.0355	0.1497	NR w	NA
Sulfate	mg/L	6	6	18.7	6.75	10.9683	250	0
Thallium, ICAP	mg/L	6	2	0.00112	0.00108	0.0011	0.002	0
Thallium, PMS	mg/L	2	0				0.002	0
Total Dissolved Solids	mg/L	6	6	232	132	185.3333	500	0
Total Suspended Solids	mg/L	6	3	11	4	7.0000	NR	NA
Uranium, ICAP	mg/L	2	0				0.03	0
Uranium, PMS	mg/L	6	2	0.00279	0.00111	0.0020	0.03 d	0

REGIME = CR **AREA NAME = Industrial Landfill II**

Alkalinity as CO3	mg/L	6	2	68.3	63.2	65.7500	NR	NA
Alkalinity as HCO3	mg/L	6	6	260	50.6	163.2000	NR	NA
Barium, ICAP	mg/L	6	6	0.63 E	0.013 E	0.2547	2	0
Calcium, ICAP	mg/L	6	6	46.2	3.2	26.7833	NR	NA
Carbon Disulfide	ug/L	7	1	0.029 J	0.029 J	0.0290	NR	NA
Chloroform	ug/L	7	2	0.076 J	0.059 J	0.0675	80	0
Chloromethane	ug/L	7	1	0.53 J	0.53 J	0.5300	NR	NA
Chromium, PMS	mg/L	6	1	0.012	0.012	0.0120	0.1	0
Conductivity	umho/	6	6	486	278	376.1667	NR	NA
Flouride	mg/L	6	2	1.3	1.2	1.2500		0
Gross Alpha Activity	pCi/L	6	4	4.39	1.17 J	2.8700	15	0
Gross Beta Activity	pCi/L	6	4	16.7	3.49 J	9.0525	50	0
Magnesium, ICAP	mg/L	6	6	30.1	5.6	21.5833	NR	NA
pH	Std	6	6	10	7.8	8.7000	6.5/8.5	2
Potassium, ICAP	mg/L	6	3	18.2	2.8	12.8000	NR	NA
Sodium, ICAP	mg/L	6	6	37	2.5	18.3167	NR	NA
Strontium, ICAP	mg/L	6	6	0.31	0.032	0.1175	NR	NA

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Sulfate	mg/L	6	3	11.6	6.8	9.1667	250	0
Total Dissolved Solids	mg/L	6	6	275	129	196.3333	500	0
Turbidity	NTU	6	6	0.33	0.13	0.2400	1	0
Uranium, KPA	mg/L	6	1	0.004	0.004	0.0040	0.03	0

REGIME = CR **AREA NAME = Industrial Landfill IV**

1,1,1-Trichloroethane	ug/L	12	4	18	14	16.0000	200	0
1,1-Dichloroethane	ug/L	12	4	40	36	38.2500	NR	NA
1,1-Dichloroethene	ug/L	12	4	9.1	7.9	8.5750	7	4
Acetone	ug/L	12	1	1.5 J	1.5 J	1.5000	NR	NA
Alkalinity as CO3	mg/L	10	1	7	7	7.0000	NR	NA
Alkalinity as HCO3	mg/L	10	10	214	148	184.4000	NR	NA
Aluminum, ICAP	mg/L	10	1	0.16	0.16	0.1600	0.2	0
Barium, ICAP	mg/L	10	6	0.033 E	0.011	0.0195	2	0
Benzene	ug/L	12	3	0.061 J	0.027 J	0.0397	5	0
Calcium, ICAP	mg/L	10	10	45.6	23.3	35.5000	NR	NA
Carbon Disulfide	ug/L	12	1	0.038 J	0.038 J	0.0380	NR	NA
Carbon Tetrachloride	ug/L	12	1	0.059 J	0.059 J	0.0590	5	0
Chloride	mg/L	10	1	3.1	3.1	3.1000	250	0
Chloroform	ug/L	12	3	0.13 J	0.067 J	0.0910	80	0
Chromium, PMS	mg/L	10	3	0.13	0.013	0.0700	0.1	1
cis-1,2-Dichloroethene	ug/L	11	1	2.6 J	2.6 J	2.6000	70	0
Conductivity	umho/	10	10	420	288	362.4000	NR	NA
Gross Alpha Activity	pCi/L	10	1	1.27	1.27	1.2700	15	0
Gross Beta Activity	pCi/L	10	1	3.12 J	3.12 J	3.1200	50	0
Iron, ICAP	mg/L	10	1	0.53	0.53	0.5300	0.3	1
Magnesium, ICAP	mg/L	10	10	29.1	19.1	23.5400	NR	NA
Manganese, ICAP	mg/L	10	1	0.022	0.022	0.0220	0.05	0
Nickel, PMS	mg/L	10	3	0.07	0.023	0.0403	0.1	0
pH	Std	10	10	8.4	7.4	7.9200	6.5/8.5	0
Sodium, ICAP	mg/L	10	6	10.2	2.7	5.2000	NR	NA
Strontium, ICAP	mg/L	10	8	0.033	0.013	0.0186	NR	NA
Sulfate	mg/L	10	3	8.4	5.3	6.8667	250	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Total Dissolved Solids	mg/L	10	10	216	137	188.1000	500	0
Total Suspended Solids	mg/L	10	2	21.2	6.8	14.0000	NR	NA
Trichloroethene	ug/L	12	1	6.8	6.8	6.8000	5	1
Turbidity	NTU	10	10	7.6	0.15	1.5290	1	3
Zinc, PMS	mg/L	10	3	0.014	0.011	0.0123		0

REGIME = CR **AREA NAME = Industrial Landfill V**

1,1,1-Trichloroethane	ug/L	12	2	0.46 J	0.41 J	0.4350	200	0
1,1-Dichloroethane	ug/L	12	2	0.41 J	0.39 J	0.4000	NR	NA
1,1-Dichloroethene	ug/L	12	2	0.2 J	0.081 J	0.1405	7	0
1,4-Dichlorobenzene	ug/L	12	1	0.12 J	0.12 J	0.1200	75	0
Acetone	ug/L	12	2	1.8 J	1.6 J	1.7000	NR	NA
Alkalinity as HCO3	mg/L	12	12	203	85.1	147.7583	NR	NA
Aluminum, ICAP	mg/L	12	3	1.4	0.12	0.9400	0.2	2
Barium, ICAP	mg/L	12	4	0.097	0.011	0.0473	2	0
Calcium, ICAP	mg/L	12	12	55.1	23.8	35.2167	NR	NA
Chloride	mg/L	12	3	7.2	4.3	5.9333	250	0
Chloromethane	ug/L	12	2	1 J	0.37 J	0.6850	NR	NA
Chromium, PMS	mg/L	12	2	0.033	0.026	0.0295	0.1	0
Conductivity	umho/	12	12	529	238	325.1667	NR	NA
Gross Alpha Activity	pCi/L	12	7	2.16 J	0.83 J	1.2957	15	0
Gross Beta Activity	pCi/L	12	2	4.55 J	3.27 J	3.9100	50	0
Iron, ICAP	mg/L	12	3	1.6	0.11	0.7800	0.3	2
Magnesium, ICAP	mg/L	12	12	33.8	10.5	19.0833	NR	NA
Manganese, ICAP	mg/L	12	2	0.025	0.011	0.0180	0.05	0
Nitrate as Nitrogen	mg/L	12	6	2.8	0.5	1.4300	10	0
pH	Std	12	12	8.4	6.9	7.8250	6.5/8.5	0
Potassium, ICAP	mg/L	12	2	2.1	2.1	2.1000	NR	NA
Sodium, ICAP	mg/L	12	4	5.2	2.6	3.7750	NR	NA
Strontium, ICAP	mg/L	12	12	0.13	0.012	0.0356	NR	NA
Sulfate	mg/L	12	2	53.4	32.7	43.0500	250	0
Toluene	ug/L	12	1	0.11 J	0.11 J	0.1100	1000	0
Total Dissolved Solids	mg/L	12	12	303	127	185.9167	500	0

COMPOUND	UNITS	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	12	1	12	12	12.0000	NR	NA
Total Xylene	ug/L	12	1	0.056 J	0.056 J	0.0560	10000	0
Trichloroethene	ug/L	12	1	0.045 J	0.045 J	0.0450	5	0
Turbidity	NTU	12	10	56.2	0.21	8.7530	1	5
Uranium, KPA	mg/L	12	1	0.004	0.004	0.0040	0.03	0
Zinc, PMS	mg/L	12	1	0.019	0.019	0.0190		0
REGIME = CR				**AREA NAME = Kerr Hollow Quarry**				
Barium, ICAP	mg/L	4	4	0.09	0.0408	0.0621	2	0
Boron, ICAP	mg/L	4	3	0.83	0.0145	0.3598	NR	NA
Cadmium, ICAP	mg/L	4	1	0.00014	0.00014	0.0001	0.005	0
Calcium, ICAP	mg/L	4	4	46.5	28.2	39.2750	NR	NA
Gross Alpha Activity	pCi/L	4	2	10.5	2.44	6.4700	15	0
Gross Beta Activity	pCi/L	4	2	14.2	13	13.6000	50	0
Iron, ICAP	mg/L	4	3	0.894	0.0368	0.3294	0.3	1
Lithium, ICAP	mg/L	4	3	0.276	0.0215	0.1332	NR	NA
Magnesium, ICAP	mg/L	4	4	33.8	16	23.2750	NR	NA
Manganese, ICAP	mg/L	4	3	0.0117	0.00556	0.0086	0.05	0
Potassium, ICAP	mg/L	4	4	17.1	1.1	7.8250	NR	NA
Sodium, ICAP	mg/L	4	4	21.4	0.674	6.8085	NR	NA
Strontium, ICAP	mg/L	4	4	6.65	0.0452	2.4113	NR	NA
Total Dissolved Solids	mg/L	4	4	284	179	236.2500	500	0
Uranium, PMS	mg/L	4	1	0.01	0.01	0.0100	0.03	0
REGIME = CR				**AREA NAME = South Campus Facility, Bethel Valley**				
cis-1,2-Dichloroethene	ug/L	2	2	2.53 J	1.84 J	2.1850	70	0
Trichloroethene	ug/L	2	2	3.9	1.63 J	2.7650	5	0
REGIME = CR				**AREA NAME = United Nuclear Corporation Site**				
Aluminum, ICAP	mg/L	10	3	0.818	0.117	0.4050	0.2	2
Barium, ICAP	mg/L	10	8	0.0348	0.00729	0.0184	2	0

COMPOUND	UNITS	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	277	30	147.3100	NR	NA
Boron, ICAP	mg/L	10	1	0.0143	0.0143	0.0143	NR	NA
Cadmium, ICAP	mg/L	10	2	0.00025	0.00017	0.0002	0.005	0
Calcium, ICAP	mg/L	10	10	55.8	1.27	26.0870	NR	NA
Carbonate	mg/L	10	2	119	76.8	97.9000	NR	NA
Chloride	mg/L	10	10	17.8	1.5	5.3170	250	0
Flouride	mg/L	10	1	3.81	3.81	3.8100		0
Gross Alpha Activity	pCi/L	10	1	4.34	4.34	4.3400	15	0
Gross Beta Activity	pCi/L	10	2	64.3	59.1	61.7000	50	2
Iron, ICAP	mg/L	10	6	0.481	0.0178	0.1496	0.3	1
Lead, ICAP	mg/L	10	1	0.00312	0.00312	0.0031	0.015	0
Lithium, ICAP	mg/L	10	2	0.128	0.119	0.1235	NR	NA
Magnesium, ICAP	mg/L	10	10	32.4	2.33	16.4960	NR	NA
Manganese, ICAP	mg/L	10	2	0.0147	0.0108	0.0128	0.05	0
Nitrate/Nitrite	mg/L	10	10	0.7	0.063	0.2965	10	0
Potassium, ICAP	mg/L	10	10	78.2	0.562	15.6864	NR	NA
Sodium, ICAP	mg/L	10	10	10.9	0.432	4.2176	NR	NA
Strontium, ICAP	mg/L	10	8	0.0448	0.00988	0.0199	NR	NA
Sulfate	mg/L	10	10	9.58	0.9	3.8220	250	0
Total Dissolved Solids	mg/L	8	8	412	156	226.6250	500	0
Total Suspended Solids	mg/L	8	1	7	7	7.0000	NR	NA
Uranium-233/234	pCi/L	8	3	0.786	0.517	0.6450	20	0
Uranium-238	pCi/L	8	2	0.388	0.377	0.3825	24	0
Vanadium, ICAP	mg/L	10	3	0.0133	0.0115	0.0121	NR	NA
Zinc, ICAP	mg/L	10	1	0.0123	0.0123	0.0123	5	0

REGIME = EF **AREA NAME = Building 8110**

1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	3	2	12	2 J	7.0000	NR	NA
1,2-Dichloroethene	ug/L	2	2	24	3 J	13.5000	70	0
2-Butanone	ug/L	3	1	6	6	6.0000	NR	NA
Carbon Tetrachloride	ug/L	3	1	2 J	2 J	2.0000	5	0
Chloride	mg/L	2	2	17.2	9.54	13.3700	250	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Chloroform	ug/L	3	2	10	1 J	5.5000	80	0
cis-1,2-Dichloroethene	ug/L	3	3	35	3 J	20.6667	70	0
Mercury, CVAA	mg/L	2	2	0.000793	0.000362	0.0006	0.002	0
Nitrate as Nitrogen	mg/L	2	2	90.1	12.1	51.1000	10	2
Nitrate/Nitrite as Nitrogen	mg/L	2	2	90.1	12.1	51.1000	10	2
Sulfate	mg/L	2	2	60	18.2	39.1000	250	0
Tetrachloroethene	ug/L	3	3	100	14	43.6667	5	3
Trichloroethene	ug/L	3	3	280 D	10	108.3333	5	3
REGIME = EF				**AREA NAME = Building 9201-2**				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	1	1	20	20	20.0000	NR	NA
1,1-Dichloroethene	ug/L	1	1	1 J	1 J	1.0000	7	0
cis-1,2-Dichloroethene	ug/L	1	1	490 D	490 D	490.0000	70	1
Tetrachloroethene	ug/L	1	1	870 D	870 D	870.0000	5	1
trans-1,2-Dichloroethene	ug/L	1	1	4 J	4 J	4.0000	100	0
Trichloroethene	ug/L	1	1	350 D	350 D	350.0000	5	1
REGIME = EF				**AREA NAME = Coal Pile Trench**				
1,2-Dichloroethene	ug/L	5	3	17	3 J	7.6667	70	0
Bromodichloromethane	ug/L	5	1	1 J	1 J	1.0000	80	0
Chloride	mg/L	5	5	70.8	7.12	24.3020	250	0
Chloroform	ug/L	5	2	21	4 J	12.5000	80	0
cis-1,2-Dichloroethene	ug/L	5	3	17	3 J	7.6667	70	0
Mercury, CVAA	mg/L	5	1	0.000513	0.000513	0.0005	0.002	0
Nitrate as Nitrogen	mg/L	5	4	4.06	0.282	1.4623	10	0
Nitrate/Nitrite as Nitrogen	mg/L	5	5	4.1	0.0856	1.2213	10	0
Sulfate	mg/L	5	5	338	232	294.2000	250	4
Tetrachloroethene	ug/L	5	5	65	5	19.4000	5	4
Trichloroethene	ug/L	5	3	4 J	1 J	2.3333	5	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME = EF				**AREA NAME = Exit Pathway - Traverse E**				
Barium, ICAP	mg/L	1	1	0.0382	0.0382	0.0382	2	0
Bicarbonate	mg/L	1	1	308	308	308.0000	NR	NA
Boron, ICAP	mg/L	1	1	0.0968	0.0968	0.0968	NR	NA
Cadmium, ICAP	mg/L	1	1	0.00073	0.00073	0.0007	0.005	0
Calcium, ICAP	mg/L	1	1	98	98	98.0000	NR	NA
Chloride	mg/L	1	1	7.7	7.7	7.7000	250	0
cis-1,2-Dichloroethene	ug/L	1	1	12.3	12.3	12.3000	70	0
Flouride	mg/L	1	1	0.29	0.29	0.2900		0
Iron, ICAP	mg/L	1	1	0.126	0.126	0.1260	0.3	0
Magnesium, ICAP	mg/L	1	1	8.8	8.8	8.8000	NR	NA
Manganese, ICAP	mg/L	1	1	0.276	0.276	0.2760	0.05	1
Methane	ug/L	1	1	12.7	12.7	12.7000	NR	NA
Nitrate/Nitrite	mg/L	1	1	0.029	0.029	0.0290	10	0
Potassium, ICAP	mg/L	1	1	3.92	3.92	3.9200	NR	NA
Sodium, ICAP	mg/L	1	1	13.2	13.2	13.2000	NR	NA
Strontium, ICAP	mg/L	1	1	0.201	0.201	0.2010	NR	NA
Sulfate	mg/L	1	1	17.2	17.2	17.2000	250	0
Tetrachloroethene	ug/L	1	1	2.34 J	2.34 J	2.3400	5	0
Total Dissolved Solids	mg/L	1	1	378	378	378.0000	500	0
Total Suspended Solids	mg/L	1	1	8	8	8.0000	NR	NA
Trichloroethene	ug/L	1	1	7.81	7.81	7.8100	5	1
REGIME = EF				**AREA NAME = Exit Pathway - Traverse I**				
1,1-Dichloroethene	ug/L	4	1	0.6 J	0.6 J	0.6000	7	0
1,2-Dichloroethene	ug/L	2	1	81 D	81 D	81.0000	70	1
Barium, ICAP	mg/L	4	4	0.194	0.05	0.1220	2	0
Benzene	ug/L	4	1	0.4 J	0.4 J	0.4000	5	0
Bicarbonate	mg/L	4	4	366	300	340.0000	NR	NA
Boron, ICAP	mg/L	4	3	0.0994	0.0201	0.0695	NR	NA
Cadmium, ICAP	mg/L	2	2	0.00021	0.00016	0.0002	0.005	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Cadmium, PMS	mg/L	2	0				0.005	0
Calcium, ICAP	mg/L	4	4	102	89.1	97.0250	NR	NA
Carbon Tetrachloride	ug/L	4	4	81	48 D	60.0000	5	4
Chloride	mg/L	4	4	40	24	31.1000	250	0
Chloroform	ug/L	4	4	46	12	28.7500	80	0
cis-1,2-Dichloroethene	ug/L	4	2	160	81 D	120.5000	70	2
Flouride	mg/L	4	2	0.2	0.1	0.1500		0
Gross Alpha Activity	pCi/L	4	4	71	7.4	34.7025	15	2
Gross Beta Activity	pCi/L	4	4	25.3	5.17	13.0050	50	0
Iron, ICAP	mg/L	4	1	0.0659	0.0659	0.0659	0.3	0
Lithium, ICAP	mg/L	4	2	0.015	0.0108	0.0129	NR	NA
Magnesium, ICAP	mg/L	4	4	43	22	32.2500	NR	NA
Manganese, ICAP	mg/L	4	4	0.201	0.0099	0.1004	0.05	2
Nitrate/Nitrite	mg/L	2	2	12.8	0.2	6.5000	10	1
Nitrate/Nitrite as Nitrogen	mg/L	2	2	16	0.17	8.0850	10	1
Potassium, ICAP	mg/L	4	4	4.9	2.6	3.5725	NR	NA
Sodium, ICAP	mg/L	4	4	20.6	7.38	13.0950	NR	NA
Strontium, ICAP	mg/L	4	4	0.71	0.2	0.4308	NR	NA
Sulfate	mg/L	4	4	61	31.6	39.6000	250	0
Tetrachloroethene	ug/L	4	4	110	5	45.7500	5	3
trans-1,2-Dichloroethene	ug/L	4	1	0.6 J	0.6 J	0.6000	100	0
Trichloroethene	ug/L	4	3	110	0.3 J	55.4333	5	2
Uranium, PMS	mg/L	4	4	0.13	0.005	0.0600	0.03	2
Vinyl Chloride	ug/L	4	1	0.9 J	0.9 J	0.9000	2	0
Zinc, ICAP	mg/L	4	2	0.019	0.0122	0.0156	5	0

REGIME = EF **AREA NAME = Exit Pathway - Traverse J**

Acetone	ug/L	14	2	8 J	3 J	5.5000	NR	NA
Alkalinity	mg/L	7	7	317	207	248.7143	NR	NA
Barium, ICAP	mg/L	7	7	0.735	0.0288	0.2202	2	0
Bicarbonate	mg/L	7	7	317	207	248.7143	NR	NA
Boron, ICAP	mg/L	7	2	0.128	0.112	0.1200	NR w	NA
Calcium, ICAP	mg/L	7	7	130	42.7	71.3714	NR k	NA

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Carbon Tetrachloride	ug/L	14	10	51.2 D	6.06	21.1660	5	10
Chloride	mg/L	7	7	31	3.01	11.3571	250	0
Chloroform	ug/L	14	9	7.19	1	3.4856	80	0
Flouride	mg/L	7	4	0.638	0.174	0.3378		0
Gross Alpha Activity	pCi/L	9	1	6	6	6.0000	15	0
Gross Beta Activity	pCi/L	9	2	9	5.7	7.3500	50	0
Iron, ICAP	mg/L	7	1	0.0928	0.0928	0.0928	0.3	0
Lead, ICAP	mg/L	7	0				0.015	0
Lead, PMS	mg/L	7	1	0.00109	0.00109	0.0011	0.015	0
Lithium, ICAP	mg/L	7	5	0.0283	0.0116	0.0183	NR w	NA
Magnesium, ICAP	mg/L	7	7	29.8	9.1	20.2957	NR k	NA
Manganese, ICAP	mg/L	7	2	0.191	0.0606	0.1258	0.05	2
Nitrate as Nitrogen	mg/L	7	6	0.585	0.06	0.2557	10	0
Nitrate/Nitrite as Nitrogen	mg/L	7	6	0.622	0.0993	0.2942	10	0
Potassium, ICAP	mg/L	7	3	4.35	2.17	2.9567	NR	NA
Sodium, ICAP	mg/L	7	7	32.9	2.57	12.9557	NR k	NA
Strontium, ICAP	mg/L	7	7	1.2	0.0584	0.6118	NR w	NA
Sulfate	mg/L	7	7	31.7	10.6	19.8286	250	0
Tetrachloroethene	ug/L	14	8	7.86	1 J	3.4763	5	1
Total Dissolved Solids	mg/L	7	7	319	232	267.1429	500	0
Total Suspended Solids	mg/L	7	1	4	4	4.0000	NR	NA
Trichloroethene	ug/L	14	4	1.72 J	1 J	1.2550	5	0
Zinc, ICAP	mg/L	7	3	0.294	0.052	0.1328	5	0

REGIME = EF **AREA NAME = Exit Pathway Scarboro Road/Pine Ridge**

Alkalinity	mg/L	1	1	178	178	178.0000	NR	NA
Barium, ICAP	mg/L	1	1	0.0753	0.0753	0.0753	2	0
Bicarbonate	mg/L	1	1	178	178	178.0000	NR	NA
Calcium, ICAP	mg/L	1	1	49.4	49.4	49.4000	NR k	NA
Chloride	mg/L	1	1	9.34	9.34	9.3400	250	0
Flouride	mg/L	1	1	0.116	0.116	0.1160		0
Gross Alpha Activity	pCi/L	1	0				15	0
Gross Beta Activity	pCi/L	1	0				50	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Iron, ICAP	mg/L	1	1	14	14	14.0000	0.3 k	1
Magnesium, ICAP	mg/L	1	1	13.4	13.4	13.4000	NR k	NA
Manganese, ICAP	mg/L	1	1	0.88	0.88	0.8800	0.05 k	1
Nitrite as Nitrogen	mg/L	1	1	0.052	0.052	0.0520		0
Potassium, ICAP	mg/L	1	1	4.76	4.76	4.7600	NR	NA
Sodium, ICAP	mg/L	1	1	5.96	5.96	5.9600	NR k	NA
Strontium, ICAP	mg/L	1	1	0.0649	0.0649	0.0649	NR w	NA
Sulfate	mg/L	1	1	6.86	6.86	6.8600	250	0
Total Dissolved Solids	mg/L	1	1	178	178	178.0000	500	0
Total Suspended Solids	mg/L	1	1	20	20	20.0000	NR	NA

REGIME = EF **AREA NAME = Exit Pathway Spring/Surface Water**

Total Dissolved Solids	mg/L	1	1	213	213	213.0000	500	0
Total Suspended Solids	mg/L	1	1	20	20	20.0000	NR	NA

REGIME = EF **AREA NAME = New Hope Pond**

1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	7	1	2 J	2 J	2.0000	NR	NA
1,1-Dichloroethene	ug/L	19	4	4 J	1.54 J	2.5425	7	0
1,2-Dichloroethene	ug/L	2	2	5	3 J	4.0000	70	0
Acetone	ug/L	14	1	6 J	6 J	6.0000	NR	NA
Alkalinity	mg/L	1	1	211	211	211.0000	NR	NA
Aluminum, ICAP	mg/L	13	6	2.83	0.065	0.8577	0.2	3
Antimony, ICAP	mg/L	13	1	0.00338	0.00338	0.0034	0.006	0
Antimony, PMS	mg/L	1	0				0.006	0
Arsenic, ICAP	mg/L	13	2	0.0104	0.00534	0.0079	0.01	1
Arsenic, PMS	mg/L	1	0				0.01	0
Barium, ICAP	mg/L	13	13	0.588	0.0371	0.2215	2	0
Bicarbonate	mg/L	11	11	285	141	214.1818	NR	NA
Boron, ICAP	mg/L	13	12	0.101	0.0227	0.0481	NR	NA
Cadmium, ICAP	mg/L	13	4	0.00466	0.00016	0.0014	0.005	0
Cadmium, PMS	mg/L	1	0				0.005	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Calcium, ICAP	mg/L	13	13	277	43.5	88.8846	NR	NA
Carbon Tetrachloride	ug/L	19	11	1340 D	1.12 J	461.4445	5	9
Chloride	mg/L	11	11	79	11.2	36.9636	250	0
Chloroform	ug/L	19	9	120 D	1.49 J	64.4544	80	2
Chromium, ICAP	mg/L	13	3	1.02	0.00954	0.5772	0.1	2
Chromium, PMS	mg/L	1	0				0.1	0
cis-1,2-Dichloroethene	ug/L	19	10	210 D	3 J	59.9650	70	2
Cobalt, ICAP	mg/L	13	1	0.00577	0.00577	0.0058	NR	NA
Copper, ICAP	mg/L	13	3	0.0298	0.00938	0.0162	1.3	0
Flouride	mg/L	11	11	0.31	0.134	0.2201		0
Gross Alpha Activity	pCi/L	13	9	433	2.74	99.5078	15	3
Gross Beta Activity	pCi/L	13	11	133	5.29	25.4345	50	2
Iron, ICAP	mg/L	13	10	4.17	0.06	1.7032	0.3	6
Lead, ICAP	mg/L	13	2	0.019	0.00251	0.0108	0.015	1
Lead, PMS	mg/L	1	0				0.015	0
Lithium, ICAP	mg/L	13	3	0.0148	0.0111	0.0134	NR	NA
Magnesium, ICAP	mg/L	13	13	26.2	11.5	18.4000	NR	NA
Manganese, ICAP	mg/L	13	11	6.58	0.00619	0.7942	0.05	5
Methane	ug/L	12	9	729	5.18	198.2089	NR	NA
Nickel, ICAP	mg/L	13	3	0.15	0.0229	0.0973	0.1	2
Nickel, PMS	mg/L	1	0				0.1	0
Nitrate as Nitrogen	mg/L	1	1	0.221	0.221	0.2210	10	0
Nitrate/Nitrite	mg/L	10	8	1.9	0.07	0.7988	10	0
Nitrate/Nitrite as Nitrogen	mg/L	1	1	0.265	0.265	0.2650	10	0
Potassium, ICAP	mg/L	13	13	6.96	1.71	3.0654	NR	NA
Sodium, ICAP	mg/L	13	13	45	7.2	15.0492	NR	NA
Strontium, ICAP	mg/L	13	13	0.564	0.0618	0.2976	NR w	NA
Sulfate	mg/L	11	11	53.8	4	28.9900	250	0
Tetrachloroethene	ug/L	19	12	731 D	4 J	169.8808	5	10
Thallium, ICAP	mg/L	13	2	0.00567	0.00103	0.0034	0.002	1
Thallium, PMS	mg/L	1	0				0.002	0
Total Dissolved Solids	mg/L	13	13	759	253	382.4615	500	1
Total Suspended Solids	mg/L	13	7	37	6	17.1429	NR	NA
trans-1,2-Dichloroethene	ug/L	19	1	3 J	3 J	3.0000	100	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Trichloroethene	ug/L	19	8	150	2 J	75.0875	5	7
Trichlorofluoromethane	ug/L	7	1	2 J	2 J	2.0000	NR	NA
Uranium, ICAP	mg/L	1	0				0.03	0
Uranium, PMS	mg/L	13	8	0.6	0.0051	0.1868	0.03	5
Uranium-233/234	pCi/L	8	7	406	0.73	102.0971	20	2
Uranium-235/236	pCi/L	8	4	23.6	0.538	10.4658	20	1
Uranium-238	pCi/L	8	6	218	2.24	70.0017	24	2
Vanadium, ICAP	mg/L	13	4	0.0191	0.012	0.0156	NR	NA
Vinyl Chloride	ug/L	19	3	5.04	4.71	4.9167	2	3
Zinc, ICAP	mg/L	13	3	0.132	0.0129	0.0556	5	0

REGIME = EF **AREA NAME = Rust Garage Area**

1,1-Dichloroethene	ug/L	2	1	2 J	2 J	2.0000	7	0
1,2-Dichloroethene	ug/L	2	1	12	12	12.0000	70	0
Acetone	ug/L	2	2	45	7 J	26.0000	NR	NA
Alkalinity	mg/L	1	1	306	306	306.0000	NR	NA
Barium, ICAP	mg/L	1	1	4.93	4.93	4.9300	2	1
Benzene	ug/L	2	2	2100 D	280 D	1190.0000	5	2
Bicarbonate	mg/L	1	1	306	306	306.0000	NR	NA
Bromoform	ug/L	2	1	2 J	2 J	2.0000	80	0
Calcium, ICAP	mg/L	1	1	1130	1130	1130.0000	NR	NA
Chloride	mg/L	1	1	40	40	40.0000	250	0
Chloroform	ug/L	2	1	13	13	13.0000	80	0
Chromium, ICAP	mg/L	1	0				0.1	0
Chromium, PMS	mg/L	2	1	0.113	0.113	0.1130	0.1	1
cis-1,2-Dichloroethene	ug/L	2	1	12	12	12.0000	70	0
Ethyl Benzene	ug/L	2	1	310 D	310 D	310.0000	700	0
Gross Alpha Activity	pCi/L	2	1	67	67	67.0000	15	1
Gross Beta Activity	pCi/L	2	2	18	1.7	9.8500	50	0
Lead, ICAP	mg/L	1	0				0.015	0
Lead, PMS	mg/L	2	1	0.0147	0.0147	0.0147	0.015	0
Lithium, ICAP	mg/L	1	1	0.167	0.167	0.1670	NR w	NA
Magnesium, ICAP	mg/L	1	1	112	112	112.0000	NR	NA

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Manganese, ICAP	mg/L	1	1	3.81	3.81	3.8100	0.05	1
Methylene chloride	ug/L	2	1	18	18	18.0000	5	1
Nickel, ICAP	mg/L	1	1	0.193	0.193	0.1930	0.1 z	1
Nickel, PMS	mg/L	2	2	0.208	0.0195	0.1138	0.1	1
Nitrate as Nitrogen	mg/L	1	1	823	823	823.0000	10	1
Nitrate/Nitrite as Nitrogen	mg/L	1	1	823	823	823.0000	10	1
Nitrite as Nitrogen	mg/L	1	1	0.287	0.287	0.2870		0
Potassium, ICAP	mg/L	1	1	7.12	7.12	7.1200	NR	NA
Sodium, ICAP	mg/L	1	1	98.9	98.9	98.9000	NR	NA
Strontium, ICAP	mg/L	1	1	2.69	2.69	2.6900	NR w	NA
Styrene	ug/L	2	1	4 J	4 J	4.0000	100	0
Sulfate	mg/L	1	1	2.4	2.4	2.4000	250	0
Tetrachloroethene	ug/L	2	1	190 D	190 D	190.0000	5	1
Toluene	ug/L	2	1	890 D	890 D	890.0000	1000	0
Total Dissolved Solids	mg/L	1	1	5430	5430	5430.0000	500	1
Total Suspended Solids	mg/L	1	1	1	1	1.0000	NR	NA
Total Xylene	ug/L	2	2	1500 D	33	766.5000	10000	0
Trichloroethene	ug/L	2	1	7	7	7.0000	5	1
Uranium, ICAP	mg/L	1	0				0.03	0
Uranium, PMS	mg/L	2	1	0.0629	0.0629	0.0629	0.03	1

REGIME = EF **AREA NAME = S-2 Site**

1,1-Dichloroethene	ug/L	2	1	4.28	4.28	4.2800	7	0
1,2-Dichloroethene	ug/L	1	1	14	14	14.0000	70	0
Acetone	ug/L	2	1	4.31 J	4.31 J	4.3100	NR	NA
Alkalinity	mg/L	1	1	142	142	142.0000	NR	NA
Aluminum, ICAP	mg/L	2	1	3.52	3.52	3.5200	0.2	1
Barium, ICAP	mg/L	2	2	0.273	0.072	0.1725	2	0
Beryllium, ICAP	mg/L	2	1	0.0123	0.0123	0.0123	0.004	1
Bicarbonate	mg/L	2	2	142	63.4	102.7000	NR	NA
Boron, ICAP	mg/L	2	1	0.3	0.3	0.3000	NR	NA
Cadmium, ICAP	mg/L	2	2	4.2	0.08	2.1400	0.005 z	2
Cadmium, PMS	mg/L	1	1	0.0788	0.0788	0.0788	0.005	1

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Calcium, ICAP	mg/L	2	2	547	87.7	317.3500	NR	NA
Carbon Tetrachloride	ug/L	2	2	42.4 DJ	2 J	22.2000	5	1
Chloride	mg/L	2	2	121	5.11	63.0550	250	0
Chloroform	ug/L	2	2	42.9 DJ	7	24.9500	80	0
cis-1,2-Dichloroethene	ug/L	2	2	257 D	14	135.5000	70	1
Cobalt, ICAP	mg/L	2	1	0.259	0.259	0.2590	NR	NA
Copper, ICAP	mg/L	2	2	65.6	0.16	32.8800	1.3	1
Ethane	ug/L	1	1	1.76 J	1.76 J	1.7600	NR	NA
Flouride	mg/L	2	2	8.9	0.91	4.9050		0
Gross Alpha Activity	pCi/L	2	2	23.7	9.4	16.5500	15	1
Gross Beta Activity	pCi/L	2	1	24.7	24.7	24.7000	50	0
Iron, ICAP	mg/L	2	1	0.147	0.147	0.1470	0.3	0
Lead, ICAP	mg/L	2	1	0.0638	0.0638	0.0638	0.015	1
Lead, PMS	mg/L	1	0				0.015	0
Lithium, ICAP	mg/L	2	1	0.0554	0.0554	0.0554	NR	NA
Magnesium, ICAP	mg/L	2	2	122	9.42	65.7100	NR	NA
Manganese, ICAP	mg/L	2	2	46.8	2.22	24.5100	0.05	2
Methane	ug/L	1	1	8.95	8.95	8.9500	NR	NA
Nickel, ICAP	mg/L	2	1	2.25	2.25	2.2500	0.1	1
Nickel, PMS	mg/L	1	1	0.0241	0.0241	0.0241	0.1	0
Nitrate as Nitrogen	mg/L	1	1	38.7	38.7	38.7000	10	1
Nitrate/Nitrite	mg/L	1	1	744	744	744.0000	10	1
Nitrate/Nitrite as Nitrogen	mg/L	1	1	38.8	38.8	38.8000	10	1
Nitrite as Nitrogen	mg/L	1	1	0.054	0.054	0.0540		0
Potassium, ICAP	mg/L	2	2	8.61	2.2	5.4050	NR	NA
Sodium, ICAP	mg/L	2	2	128	8.37	68.1850	NR	NA
Strontium, ICAP	mg/L	2	2	0.985	0.171	0.5780	NR w	NA
Sulfate	mg/L	2	2	28.3	8.68	18.4900	250	0
Tetrachloroethene	ug/L	2	2	766 D	230 D	498.0000	5	2
Thallium, ICAP	mg/L	2	1	0.00801	0.00801	0.0080	0.002	1
Thallium, PMS	mg/L	1	1	0.000845	0.000845	0.0008	0.002	0
Total Dissolved Solids	mg/L	2	2	4010	383	2196.5000	500	1
Total Suspended Solids	mg/L	2	1	5	5	5.0000	NR	NA
Trichloroethene	ug/L	2	2	812 D	110	461.0000	5	2

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT		MINIMUM DETECTED RESULT		AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Uranium, ICAP	mg/L	1	0						0.03	0
Uranium, PMS	mg/L	2	2	0.0044		0.0022		0.0033	0.03	0
Vinyl Chloride	ug/L	2	1	75.6	D	75.6	D	75.6000	2	1
Zinc, ICAP	mg/L	2	2	6.34		0.128		3.2340	5	1

REGIME = EF **AREA NAME = S-3 Site**

1,1-Dichloroethene	ug/L	2	2	1.37	J	1		1.1850	7	0
Arsenic, ICAP	mg/L	2	1	0.0058		0.0058		0.0058	0.01	0
Barium, ICAP	mg/L	2	2	75.4	D	67		71.2000	2	2
Benzene	ug/L	2	1	1.52	J	1.52	J	1.5200	5	0
Beryllium, ICAP	mg/L	2	1	0.0023		0.0023		0.0023	0.004	0
Bicarbonate	mg/L	2	2	894		780		837.0000	NR	NA
Bromoform	ug/L	2	2	10.1		3.9		7.0000	80	0
Cadmium, ICAP	mg/L	1	1	0.00486	D	0.00486	D	0.0049	0.005	0
Cadmium, PMS	mg/L	1	1	0.0021		0.0021		0.0021	0.005	0
Calcium, ICAP	mg/L	2	2	12000		9840	D	10920.0000	NR	NA
Chloride	mg/L	2	2	183		180		181.5000	250	0
Chloroform	ug/L	2	2	31.6	D	30		30.8000	80	0
Chromium, ICAP	mg/L	2	1	0.017		0.017		0.0170	0.1	0
Cobalt, ICAP	mg/L	2	2	0.16	D	0.16	D	0.1600	NR	NA
Gross Alpha Activity	pCi/L	2	1	186		186		186.0000	15	1
Gross Beta Activity	pCi/L	2	2	16200		13400		14800.0000	50	2
Lead, ICAP	mg/L	2	1	0.0068		0.0068		0.0068	0.015	0
Lithium, ICAP	mg/L	2	2	0.467	D	0.34		0.4035	NR	NA
Magnesium, ICAP	mg/L	2	2	996	D	980		988.0000	NR	NA
Manganese, ICAP	mg/L	2	2	170		158	D	164.0000	0.05	2
Methylene chloride	ug/L	2	1	48.8	D	48.8	D	48.8000	5	1
Nickel, ICAP	mg/L	2	2	0.203	D	0.12		0.1615	0.1	2
Nitrate/Nitrite	mg/L	1	1	8030		8030		8030.0000	10	1
Potassium, ICAP	mg/L	2	2	38		24.2	D	31.1000	NR	NA
Sodium, ICAP	mg/L	2	2	520		48.7	D	284.3500	NR	NA
Strontium, ICAP	mg/L	2	2	29.8	D	28		28.9000	NR	NA
Sulfate	mg/L	2	1	9.3		9.3		9.3000	250	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Technetium-99	pCi/L	2	2	80000	29000	54500.0000	900	2
Tetrachloroethene	ug/L	2	2	10.7	5.5	8.1000	5	2
Trichloroethene	ug/L	2	2	5.7	3.4	4.5500	5	1
Uranium, PMS	mg/L	2	2	0.014	0.013	0.0135	0.03	0
Zinc, ICAP	mg/L	2	1	0.012	0.012	0.0120	5	0

REGIME = EF **AREA NAME = Union Valley - Exit Pathway**

Aluminum, ICAP	mg/L	4	4	0.769	0.2	0.3883	0.2	3
Barium, ICAP	mg/L	4	4	0.16	0.0268	0.0942	2	0
Bicarbonate	mg/L	4	2	193	135	164.0000	NR	NA
Boron, ICAP	mg/L	4	2	0.0149	0.0143	0.0146	NR	NA
Calcium, ICAP	mg/L	4	4	124	51.1	87.3250	NR	NA
Carbon Tetrachloride	ug/L	8	2	2.1 J	1.79 J	1.9450	5	0
Carbonate	mg/L	4	2	87.1	20.3	53.7000	NR	NA
Chloride	mg/L	4	4	5.75	1.4	3.6200	250	0
cis-1,2-Dichloroethene	ug/L	8	1	9.05	9.05	9.0500	70	0
Flouride	mg/L	4	2	0.17	0.123	0.1465		0
Gross Alpha Activity	pCi/L	4	1	4.66	4.66	4.6600	15	0
Gross Beta Activity	pCi/L	4	4	13.6	6.09	9.7075	50	0
Iron, ICAP	mg/L	4	4	0.851	0.164	0.5018	0.3	3
Lead, ICAP	mg/L	4	1	0.00244	0.00244	0.0024	0.015	0
Lithium, ICAP	mg/L	4	2	0.0342	0.0334	0.0338	NR	NA
Magnesium, ICAP	mg/L	4	4	3.7	1.02	2.3400	NR	NA
Manganese, ICAP	mg/L	4	3	0.016	0.00582	0.0097	0.05	0
Nitrate/Nitrite	mg/L	4	4	0.62	0.22	0.3650	10	0
Potassium, ICAP	mg/L	4	4	12.7	2.45	7.5575	NR	NA
Sodium, ICAP	mg/L	4	4	6.05	1.1	3.5250	NR	NA
Strontium, ICAP	mg/L	4	4	0.632	0.0638	0.3504	NR	NA
Sulfate	mg/L	4	4	8.03	4.5	6.6725	250	0
Tetrachloroethene	ug/L	8	2	1.25 J	1.03 J	1.1400	5	0
Total Dissolved Solids	mg/L	8	8	587	162	318.7500	500	1
Total Suspended Solids	mg/L	8	6	23	5	12.1667	NR	NA
Trichloroethene	ug/L	8	1	1.08 J	1.08 J	1.0800	5	0
Vinyl Chloride	ug/L	8	1	1.72	1.72	1.7200	2	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME = EF				**AREA NAME = Uranium Oxide Vault**				
Chromium, PMS	mg/L	1	1	0.00354	0.00354	0.0035	0.1	0
Gross Alpha Activity	pCi/L	1	1	140	140	140.0000	15	1
Gross Beta Activity	pCi/L	1	1	82	82	82.0000	50	1
Nickel, PMS	mg/L	1	1	0.0216	0.0216	0.0216	0.1	0
Uranium, PMS	mg/L	1	1	0.555	0.555	0.5550	0.03	1
Uranium-234	pCi/L	1	1	26	26	26.0000	20	1
Uranium-235	pCi/L	1	1	2	2	2.0000	24	0
Uranium-236	pCi/L	1	1	0.76	0.76	0.7600	20	0
Uranium-238	pCi/L	1	1	190	190	190.0000	24	1
REGIME = EF				**AREA NAME = Waste Coolant Processing Facility**				
1,1,1-Trichloroethane	ug/L	2	2	52	4 J	28.0000	200	0
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	2	2	2300 D	1100 D	1700.0000	NR	NA
1,1-Dichloroethane	ug/L	2	2	43	17	30.0000	NR	NA
1,1-Dichloroethene	ug/L	2	2	55	20	37.5000	7	2
1,2-Dichloropropane	ug/L	2	1	1 J	1 J	1.0000	5	0
cis-1,2-Dichloroethene	ug/L	2	2	1500 D	740 D	1120.0000	70	2
Tetrachloroethene	ug/L	2	2	560 D	380 D	470.0000	5	2
trans-1,2-Dichloroethene	ug/L	2	2	17	9	13.0000	100	0
Trichloroethene	ug/L	2	2	450 D	170	310.0000	5	2
Vinyl Chloride	ug/L	2	2	13	11	12.0000	2	2
REGIME = EF				**AREA NAME = Y-12 Fuel Station**				
1,2-Dichloroethane	ug/L	2	1	373 D	373 D	373.0000	5	1
Benzene	ug/L	2	1	8110 D	8110 D	8110.0000	5	1
Ethyl Benzene	ug/L	2	1	837 D	837 D	837.0000	700	1
Toluene	ug/L	2	1	2110 D	2110 D	2110.0000	1000	1
Total Xylene	ug/L	2	1	6670 D	6670 D	6670.0000	10000	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
REGIME = EF				**AREA NAME = Y-12 Grid Well B3**				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	2	2	330 D	190	260.0000	NR	NA
1,1-Dichloroethane	ug/L	2	2	17	11	14.0000	NR	NA
1,1-Dichloroethene	ug/L	2	2	15	13	14.0000	7	2
1,2-Dichloroethene	ug/L	2	2	460 D	440 D	450.0000	70	2
Alkalinity	mg/L	1	1	139	139	139.0000	NR	NA
Barium, ICAP	mg/L	1	1	0.964	0.964	0.9640	2	0
Barium, PMS	mg/L	1	1	0.991	0.991	0.9910	z	0
Bicarbonate	mg/L	1	1	139	139	139.0000	NR	NA
Calcium, ICAP	mg/L	1	1	384	384	384.0000	NR	NA
Chloride	mg/L	2	2	15	13.2	14.1000	250	0
cis-1,2-Dichloroethene	ug/L	2	2	450 D	430 D	440.0000	70	2
Gross Alpha Activity	pCi/L	1	0				15	0
Gross Beta Activity	pCi/L	1	1	22	22	22.0000	50	0
Lead, ICAP	mg/L	1	0				0.015	0
Lead, PMS	mg/L	1	1	0.0015	0.0015	0.0015	0.015 d	0
Lithium, ICAP	mg/L	1	1	0.0232	0.0232	0.0232	NR w	NA
Magnesium, ICAP	mg/L	1	1	33.5	33.5	33.5000	NR	NA
Manganese, ICAP	mg/L	1	1	0.712	0.712	0.7120	0.05	1
Nickel, ICAP	mg/L	1	0				0.1	0
Nickel, PMS	mg/L	1	1	0.0375	0.0375	0.0375	0.1 d	0
Nitrate as Nitrogen	mg/L	2	2	292	261	276.5000	10	2
Nitrate/Nitrite as Nitrogen	mg/L	2	2	292	261	276.5000	10	2
Nitrite as Nitrogen	mg/L	2	1	0.0538	0.0538	0.0538		0
Potassium, ICAP	mg/L	1	1	3.36	3.36	3.3600	NR	NA
Sodium, ICAP	mg/L	1	1	11.7	11.7	11.7000	NR	NA
Strontium, ICAP	mg/L	1	1	1.23	1.23	1.2300	NR w	NA
Sulfate	mg/L	2	2	20.1	16.4	18.2500	250	0
Tetrachloroethene	ug/L	2	2	390 D	260 D	325.0000	5	2
Total Dissolved Solids	mg/L	1	1	2030	2030	2030.0000	500	1

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
trans-1,2-Dichloroethene	ug/L	2	2	7	7	7.0000	100	0
Trichloroethene	ug/L	2	2	170	140	155.0000	5	2
Vinyl Chloride	ug/L	2	2	14	13	13.5000	2	2

REGIME = EF **AREA NAME = Y-12 Grid Well C3**

1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	3	1	2 J	2 J	2.0000	NR	NA
1,1-Dichloroethene	ug/L	3	2	13	2 J	7.5000	7	1
1,2-Dichloroethene	ug/L	2	2	99	3 J	51.0000	70	1
2-Butanone	ug/L	3	1	6	6	6.0000	NR	NA
Alkalinity	mg/L	2	2	196	185	190.5000	NR	NA
Barium, ICAP	mg/L	2	2	0.108	0.0561	0.0821	2	0
Bicarbonate	mg/L	2	2	196	185	190.5000	NR	NA
Boron, ICAP	mg/L	2	2	0.141	0.122	0.1315	NR w	NA
Calcium, ICAP	mg/L	2	2	101	90.2	95.6000	NR	NA
Chloride	mg/L	2	2	31	14.6	22.8000	250	0
cis-1,2-Dichloroethene	ug/L	3	3	920 D	3 J	340.3333	70	2
Gross Alpha Activity	pCi/L	2	2	7.4	5.3	6.3500	15	0
Gross Beta Activity	pCi/L	2	0				50	0
Iron, ICAP	mg/L	2	1	0.206	0.206	0.2060	0.3	0
Lithium, ICAP	mg/L	2	2	0.0158	0.013	0.0144	NR w	NA
Magnesium, ICAP	mg/L	2	2	12.3	7.92	10.1100	NR	NA
Nickel, ICAP	mg/L	2	0				0.1	0
Nickel, PMS	mg/L	2	1	0.0156	0.0156	0.0156	0.1	0
Nitrate as Nitrogen	mg/L	2	2	0.985	0.295	0.6400	10	0
Nitrate/Nitrite as Nitrogen	mg/L	2	2	1.02	0.33	0.6750	10	0
Potassium, ICAP	mg/L	2	2	2.76	2.71	2.7350	NR	NA
Sodium, ICAP	mg/L	2	2	11.8	8.71	10.2550	NR	NA
Strontium, ICAP	mg/L	2	2	0.299	0.244	0.2715	NR w	NA
Sulfate	mg/L	2	2	95.1	73.3	84.2000	250	0
Tetrachloroethene	ug/L	3	3	1000 D	12	350.6667	5	3
Total Dissolved Solids	mg/L	2	2	376	366	371.0000	500	0
Total Suspended Solids	mg/L	2	2	3	2	2.5000	NR	NA

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
trans-1,2-Dichloroethene	ug/L	3	2	7	2 J	4.5000	100	0
Trichloroethene	ug/L	3	3	170	3 J	82.6667	5	2
Vinyl Chloride	ug/L	3	1	59	59	59.0000	2	1
REGIME = EF				**AREA NAME = Y-12 Grid Well D2**				
Tetrachloroethene	ug/L	1	1	22	22	22.0000	5	1
REGIME = EF				**AREA NAME = Y-12 Grid Well E1**				
Alkalinity	mg/L	1	1	324	324	324.0000	NR	NA
Barium, ICAP	mg/L	1	1	0.167	0.167	0.1670	2	0
Bicarbonate	mg/L	1	1	324	324	324.0000	NR	NA
Calcium, ICAP	mg/L	1	1	129	129	129.0000	NR	NA
Chloride	mg/L	1	1	30.9	30.9	30.9000	250	0
Gross Alpha Activity	pCi/L	1	0				15	0
Gross Beta Activity	pCi/L	1	0				50	0
Iron, ICAP	mg/L	1	1	0.115	0.115	0.1150	0.3	0
Lead, ICAP	mg/L	1	0				0.015	0
Lead, PMS	mg/L	1	1	0.00088	0.00088	0.0009	0.015	0
Lithium, ICAP	mg/L	1	1	0.0161	0.0161	0.0161	NR w	NA
Magnesium, ICAP	mg/L	1	1	13.7	13.7	13.7000	NR	NA
Manganese, ICAP	mg/L	1	1	0.0313	0.0313	0.0313	0.05	0
Nickel, ICAP	mg/L	1	0				0.1	0
Nickel, PMS	mg/L	1	1	0.0151	0.0151	0.0151	0.1	0
Nitrate/Nitrite as Nitrogen	mg/L	1	1	0.0627	0.0627	0.0627	10	0
Sodium, ICAP	mg/L	1	1	10.9	10.9	10.9000	NR	NA
Strontium, ICAP	mg/L	1	1	0.189	0.189	0.1890	NR w	NA
Sulfate	mg/L	1	1	11.1	11.1	11.1000	250	0
Total Dissolved Solids	mg/L	1	1	425	425	425.0000	500	0
Zinc, ICAP	mg/L	1	1	0.0789	0.0789	0.0789	5	0

COMPOUND	UNITS	NUMBER OF SAMPLES	MAXIMUM NUMBER DETECTED	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	NUMBER OF DETECTED RESULT	REF. VALUE	RESULTS > REF.
		REGIME = EF		AREA NAME = Y-12 Grid Well E3				
1,1,1-Trichloroethane	ug/L	3	1	1 J	1 J	1.0000	200	0
1,1-Dichloroethane	ug/L	3	2	20	2 J	11.0000	NR	NA
1,1-Dichloroethene	ug/L	3	1	9	9	9.0000	7	1
1,2-Dichloroethene	ug/L	2	1	10	10	10.0000	70	0
Alkalinity	mg/L	2	2	206	195	200.5000	NR	NA
Barium, ICAP	mg/L	2	2	0.367	0.267	0.3170	2	0
Bicarbonate	mg/L	2	2	206	195	200.5000	NR	NA
Boron, ICAP	mg/L	2	1	0.556	0.556	0.5560	NR w	NA
Calcium, ICAP	mg/L	2	2	78	9.02	43.5100	NR	NA
Carbon Tetrachloride	ug/L	3	1	4 J	4 J	4.0000	5	0
Chloride	mg/L	2	2	22.9	6.38	14.6400	250	0
cis-1,2-Dichloroethene	ug/L	3	2	8	1 J	4.5000	70	0
Gross Alpha Activity	pCi/L	2	1	13	13	13.0000	15	0
Gross Beta Activity	pCi/L	2	1	6.1	6.1	6.1000	50	0
Iron, ICAP	mg/L	2	1	0.263	0.263	0.2630	0.3	0
Lithium, ICAP	mg/L	2	2	0.0628	0.0136	0.0382	NR w	NA
Magnesium, ICAP	mg/L	2	2	9.74	3.04	6.3900	NR	NA
Manganese, ICAP	mg/L	2	1	0.00731	0.00731	0.0073	0.05	0
Nickel, ICAP	mg/L	2	0				0.1	0
Nickel, PMS	mg/L	2	1	0.0323	0.0323	0.0323	0.1	0
Nitrate as Nitrogen	mg/L	2	2	0.755	0.114	0.4345	10	0
Nitrate/Nitrite as Nitrogen	mg/L	2	2	0.792	0.15	0.4710	10	0
Potassium, ICAP	mg/L	2	2	5.15	3.39	4.2700	NR	NA
Sodium, ICAP	mg/L	2	2	83.6	11	47.3000	NR	NA
Strontium, ICAP	mg/L	2	2	0.666	0.508	0.5870	NR w	NA
Sulfate	mg/L	2	2	22	9.41	15.7050	250	0
Tetrachloroethene	ug/L	3	2	36	4 J	20.0000	5	1
Total Dissolved Solids	mg/L	2	2	331	181	256.0000	500	0
Total Suspended Solids	mg/L	2	1	3	3	3.0000	NR	NA
trans-1,2-Dichloroethene	ug/L	3	1	2 J	2 J	2.0000	100	0
Trichloroethene	ug/L	3	2	16	2 J	9.0000	5	1

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
		REGIME = EF		**AREA NAME = Y-12 Grid Well F2**				
Alkalinity	mg/L	2	2	222	211	216.5000	NR	NA
Barium, ICAP	mg/L	2	2	0.222	0.153	0.1875	2	0
Bicarbonate	mg/L	2	2	222	154	188.0000	NR	NA
Boron, ICAP	mg/L	2	1	0.19	0.19	0.1900	NR w	NA
Calcium, ICAP	mg/L	2	2	105	3.14	54.0700	NR k	NA
Carbonate	mg/L	2	1	57.1	57.1	57.1000	NR	NA
Chloride	mg/L	2	2	83.1	10.9	47.0000	250	0
Flouride	mg/L	2	1	0.477	0.477	0.4770		0
Gross Alpha Activity	pCi/L	2	0				15	0
Gross Beta Activity	pCi/L	2	1	5.8	5.8	5.8000	50	0
Iron, ICAP	mg/L	2	1	2.95	2.95	2.9500	0.3	1
Lithium, ICAP	mg/L	2	2	0.0364	0.0114	0.0239	NR w	NA
Magnesium, ICAP	mg/L	2	2	19.4	2.28	10.8400	NR k	NA
Manganese, ICAP	mg/L	2	1	0.289	0.289	0.2890	0.05	1
Potassium, ICAP	mg/L	2	2	3.63	2.48	3.0550	NR	NA
Sodium, ICAP	mg/L	2	2	96.2	26	61.1000	NR k	NA
Strontium, ICAP	mg/L	2	2	1.94	0.402	1.1710	NR kw	NA
Sulfate	mg/L	2	2	44.2	8.48	26.3400	250	0
Total Dissolved Solids	mg/L	2	2	456	248	352.0000	500	0
Total Suspended Solids	mg/L	2	2	3	2	2.5000	NR	NA
		REGIME = EF		**AREA NAME = Y-12 Grid Well G3**				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	3	1	2 J	2 J	2.0000	NR	NA
1,1-Dichloroethene	ug/L	3	2	2 J	2 J	2.0000	7	0
Carbon Tetrachloride	ug/L	3	3	160	12	97.3333	5	3
Chloroform	ug/L	3	3	6	2 J	4.3333	80	0
cis-1,2-Dichloroethene	ug/L	3	2	6	4 J	5.0000	70	0
Tetrachloroethene	ug/L	3	2	22	9	15.5000	5	2
Trichloroethene	ug/L	3	2	7	4 J	5.5000	5	1

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
		REGIME = EF		**AREA NAME = Y-12 Grid Well H3**				
2-Butanone	ug/L	2	1	6	6	6.0000	NR	NA
Alkalinity	mg/L	1	1	191	191	191.0000	NR	NA
Barium, ICAP	mg/L	1	1	0.0874	0.0874	0.0874	2	0
Bicarbonate	mg/L	1	1	191	191	191.0000	NR	NA
Calcium, ICAP	mg/L	1	1	95.1	95.1	95.1000	NR	NA
Chloride	mg/L	1	1	35.1	35.1	35.1000	250	0
Chromium, ICAP	mg/L	1	1	0.0272	0.0272	0.0272	0.1 z	0
Chromium, PMS	mg/L	1	1	0.036	0.036	0.0360	0.1	0
Gross Alpha Activity	pCi/L	1	0				15	0
Gross Beta Activity	pCi/L	1	0				50	0
Iron, ICAP	mg/L	1	1	0.173	0.173	0.1730	0.3	0
Lead, ICAP	mg/L	1	0				0.015	0
Lead, PMS	mg/L	1	1	0.072	0.072	0.0720	0.015	1
Magnesium, ICAP	mg/L	1	1	6.05	6.05	6.0500	NR	NA
Manganese, ICAP	mg/L	1	1	0.00742	0.00742	0.0074	0.05	0
Nickel, ICAP	mg/L	1	1	0.189	0.189	0.1890	0.1 z	1
Nickel, PMS	mg/L	1	1	0.178	0.178	0.1780	0.1	1
Nitrate as Nitrogen	mg/L	1	1	1.46	1.46	1.4600	10	0
Nitrate/Nitrite as Nitrogen	mg/L	1	1	1.5	1.5	1.5000	10	0
Potassium, ICAP	mg/L	1	1	2.83	2.83	2.8300	NR	NA
Sodium, ICAP	mg/L	1	1	15.6	15.6	15.6000	NR	NA
Strontium, ICAP	mg/L	1	1	0.161	0.161	0.1610	NR w	NA
Sulfate	mg/L	1	1	51.8	51.8	51.8000	250	0
Total Dissolved Solids	mg/L	1	1	333	333	333.0000	500	0
Total Suspended Solids	mg/L	1	1	2	2	2.0000	NR	NA
Trichloroethene	ug/L	2	2	4 J	1 J	2.5000	5	0
		REGIME = EF		**AREA NAME = Y-12 Grid Well J-Primary**				
1,1,1-Trichloroethane	ug/L	3	2	1.5 J	1.37 J	1.4350	200	0
1,1-Dichloroethane	ug/L	3	2	13.1	11.5	12.3000	NR	NA
1,1-Dichloroethene	ug/L	3	2	54.2 E	52.8 E	53.5000	7	2
1,2-Dichloroethene	ug/L	1	1	17	17	17.0000	70	0
Aluminum, ICAP	mg/L	2	1	0.725	0.725	0.7250	0.2	1

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Barium, ICAP	mg/L	2	2	0.538	0.484	0.5110	2	0
Bicarbonate	mg/L	2	2	277	260	268.5000	NR	NA
Boron, ICAP	mg/L	2	2	0.0779	0.0712	0.0746	NR	NA
Calcium, ICAP	mg/L	2	2	78	75.2	76.6000	NR	NA
Chloride	mg/L	2	2	40.4	38.2	39.3000	250	0
cis-1,2-Dichloroethene	ug/L	3	3	67.8 E	17	50.7000	70	0
Ethylene	ug/L	2	1	1.56 J	1.56 J	1.5600		0
Flouride	mg/L	2	1	0.16	0.16	0.1600		0
Gross Beta Activity	pCi/L	2	2	16	3.64	9.8200	50	0
Iron, ICAP	mg/L	2	1	0.444	0.444	0.4440	0.3	1
Lithium, ICAP	mg/L	2	2	0.0207	0.0134	0.0171	NR	NA
Magnesium, ICAP	mg/L	2	2	22.6	21.7	22.1500	NR	NA
Manganese, ICAP	mg/L	2	2	0.085	0.0453	0.0652	0.05	1
Methane	ug/L	2	2	26.9	15.4	21.1500	NR	NA
Nitrate/Nitrite	mg/L	2	1	0.02	0.02	0.0200	10	0
Potassium, ICAP	mg/L	2	2	5.57	3.89	4.7300	NR	NA
Sodium, ICAP	mg/L	2	2	13	12.1	12.5500	NR	NA
Strontium, ICAP	mg/L	2	2	0.73	0.678	0.7040	NR	NA
Sulfate	mg/L	2	2	16.6	14.9	15.7500	250	0
Tetrachloroethene	ug/L	3	2	2460 D	2090 D	2275.0000	5	2
Total Dissolved Solids	mg/L	2	2	404	381	392.5000	500	0
Total Suspended Solids	mg/L	2	2	9	6	7.5000	NR	NA
trans-1,2-Dichloroethene	ug/L	3	2	3.1 J	3.04 J	3.0700	100	0
Trichloroethene	ug/L	3	2	172 DJ	101 DJ	136.5000	5	2
Vanadium, ICAP	mg/L	2	1	0.0129	0.0129	0.0129	NR	NA
Vinyl Chloride	ug/L	3	3	4.72	4	4.4500	2	3

REGIME = EF **AREA NAME = Y-12 Grid Well K1**

Alkalinity	mg/L	1	1	230	230	230.0000	NR	NA
Barium, ICAP	mg/L	1	1	0.302	0.302	0.3020	2	0
Bicarbonate	mg/L	1	1	230	230	230.0000	NR	NA
Calcium, ICAP	mg/L	1	1	47.7	47.7	47.7000	NR	NA
Chloride	mg/L	1	1	7.22	7.22	7.2200	250	0

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Gross Alpha Activity	pCi/L	1	0				15	0
Gross Beta Activity	pCi/L	1	0				50	0
Lithium, ICAP	mg/L	1	1	0.0276	0.0276	0.0276	NR w	NA
Magnesium, ICAP	mg/L	1	1	10.9	10.9	10.9000	NR	NA
Manganese, ICAP	mg/L	1	1	0.0172	0.0172	0.0172	0.05	0
Potassium, ICAP	mg/L	1	1	3.48	3.48	3.4800	NR	NA
Sodium, ICAP	mg/L	1	1	36.1	36.1	36.1000	NR	NA
Strontium, ICAP	mg/L	1	1	1.4	1.4	1.4000	NR w	NA
Sulfate	mg/L	1	1	18	18	18.0000	250	0
Total Dissolved Solids	mg/L	1	1	176	176	176.0000	500	0

REGIME = EF **AREA NAME = Y-12 Grid Well K2**

Alkalinity	mg/L	1	1	199	199	199.0000	NR	NA
Barium, ICAP	mg/L	1	1	0.174	0.174	0.1740	2	0
Bicarbonate	mg/L	1	1	199	199	199.0000	NR	NA
Calcium, ICAP	mg/L	1	1	39.9	39.9	39.9000	NR	NA
Chloride	mg/L	1	1	2.13	2.13	2.1300	250	0
Flouride	mg/L	1	1	0.199	0.199	0.1990		0
Gross Alpha Activity	pCi/L	1	0				15	0
Gross Beta Activity	pCi/L	1	0				50	0
Iron, ICAP	mg/L	1	1	0.222	0.222	0.2220	0.3	0
Lithium, ICAP	mg/L	1	1	0.0177	0.0177	0.0177	NR w	NA
Magnesium, ICAP	mg/L	1	1	9.69	9.69	9.6900	NR	NA
Manganese, ICAP	mg/L	1	1	0.0156	0.0156	0.0156	0.05	0
Potassium, ICAP	mg/L	1	1	2.3	2.3	2.3000	NR	NA
Sodium, ICAP	mg/L	1	1	33.4	33.4	33.4000	NR	NA
Strontium, ICAP	mg/L	1	1	0.757	0.757	0.7570	NR w	NA
Sulfate	mg/L	1	1	13.3	13.3	13.3000	250	0
Tetrachloroethene	ug/L	1	1	1 J	1 J	1.0000	5	0
Total Dissolved Solids	mg/L	1	1	270	270	270.0000	500	0
Total Suspended Solids	mg/L	1	1	4	4	4.0000	NR	NA

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
		REGIME = EF		**AREA NAME = Y-12 Complex Site**				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	16	6	130	1 J	30.8333	NR	NA
1,1-Dichloroethane	ug/L	16	9	46	3 J	14.6667	NR	NA
1,1-Dichloroethene	ug/L	16	9	210	2 J	73.7778	7	7
1,2-Dichloroethene	ug/L	15	11	1600 D	2 J	744.5455	70	7
1,4-Dichlorobenzene	ug/L	16	1	1 J	1 J	1.0000	75	0
Alkalinity	mg/L	14	14	245	69.1	164.7214	NR	NA
Aluminum, ICAP	mg/L	14	2	1.26	0.315	0.7875	0.2	2
Barium, ICAP	mg/L	14	14	0.257	0.0381	0.1273	2	0
Barium, PMS	mg/L	3	3	0.246	0.0425	0.1542	dz	0
Benzene	ug/L	16	2	2 J	1 J	1.5000	5	0
Bicarbonate	mg/L	14	14	245	69.1	164.7214	NR	NA
Boron, ICAP	mg/L	14	6	0.164	0.103	0.1297	NR w	NA
Calcium, ICAP	mg/L	14	14	103	22.6	67.9714	NR k	NA
Chloride	mg/L	15	15	32.1	2.77	14.9727	250	0
Chloroethane	ug/L	16	1	1 J	1 J	1.0000	NR	NA
Chloroform	ug/L	16	2	3 J	1 J	2.0000	80	0
Chromium, ICAP	mg/L	14	1	0.173	0.173	0.1730	0.1 z	1
Chromium, PMS	mg/L	15	5	0.145	0.00392	0.0359	0.1 d	1
cis-1,2-Dichloroethene	ug/L	16	12	1500 D	2 J	685.7500	70	8
Flouride	mg/L	14	4	0.471	0.165	0.3385		0
Gross Alpha Activity	pCi/L	15	3	35	8.9	17.7667	15	1
Gross Beta Activity	pCi/L	15	3	9	6	7.4333	50	0
Iron, ICAP	mg/L	14	6	0.904	0.0568	0.3330	0.3	2
Lead, ICAP	mg/L	14	0				0.015	0
Lead, PMS	mg/L	15	1	0.00107	0.00107	0.0011	0.015 d	0
Lithium, ICAP	mg/L	14	7	0.0224	0.0108	0.0174	NR w	NA
Magnesium, ICAP	mg/L	14	14	32.9	3.25	11.2871	NR k	NA
Manganese, ICAP	mg/L	14	11	0.0471	0.0056	0.0185	0.05	0
Mercury, CVAA	mg/L	14	2	0.000083	0.000051	0.0001	0.002	0
Nickel, ICAP	mg/L	14	1	0.135	0.135	0.1350	0.1 z	1

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Nickel, PMS	mg/L	15	5	0.102	0.0102	0.0360	0.1 d	1
Nitrate as Nitrogen	mg/L	15	10	212	0.138	22.7732	10	1
Nitrate/Nitrite as Nitrogen	mg/L	15	12	212	0.0767	19.0283	10	1
Nitrite as Nitrogen	mg/L	15	2	0.117	0.0558	0.0864		0
Potassium, ICAP	mg/L	14	11	6.8	2.13	3.9191	NR	NA
Sodium, ICAP	mg/L	14	14	46.5	2.17	11.7571	NR k	NA
Strontium, ICAP	mg/L	14	14	1.37	0.0414	0.4798	NR kw	NA
Sulfate	mg/L	15	15	155	6.26	55.3007	250	0
Tetrachloroethene	ug/L	16	12	51000 D	2 J	12059.8333	5	11
Toluene	ug/L	16	2	4 J	2 J	3.0000	1000	0
Total Dissolved Solids	mg/L	14	14	404	115	271.6429	500	0
Total Suspended Solids	mg/L	14	7	3	1	2.0000	NR	NA
trans-1,2-Dichloroethene	ug/L	16	9	76	1 J	29.0000	100	0
Trichloroethene	ug/L	16	11	6400 D	5 J	1841.6364	5	10
Uranium, ICAP	mg/L	14	0				0.03	0
Uranium, PMS	mg/L	15	5	0.0421	0.000635	0.0094	0.03	1
Uranium-234	pCi/L	1	1	25	25	25.0000	20	1
Uranium-235	pCi/L	1	1	0.85	0.85	0.8500	24	0
Uranium-236	pCi/L	1	1	0.67	0.67	0.6700	20	0
Uranium-238	pCi/L	1	1	16	16	16.0000	24	0
Vinyl Chloride	ug/L	16	7	530 D	7	146.8571	2	7
Zinc, ICAP	mg/L	14	1	0.08	0.08	0.0800	5	0

REGIME = EF **AREA NAME = Y-12 Salvage Yard**

1,1,1,2-Tetrachloroethane	ug/L	4	1	2 J	2 J	2.0000	NR	NA
1,1,1-Trichloroethane	ug/L	5	1	12	12	12.0000	200	0
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ug/L	5	1	19	19	19.0000	NR	NA
1,1-Dichloroethane	ug/L	5	1	5 J	5 J	5.0000	NR	NA
1,1-Dichloroethene	ug/L	5	1	160	160	160.0000	7	1
1,2-Dichloroethene	ug/L	4	1	39	39	39.0000	70	0
Alkalinity	mg/L	4	4	600	59.8	238.9500	NR	NA
Barium, ICAP	mg/L	4	4	153	0.169	41.8323	2	3

COMPOUND	UNITS	NUMBER OF SAMPLES	NUMBER DETECTED	MAXIMUM DETECTED RESULT	MINIMUM DETECTED RESULT	AVERAGE DETECTED RESULT	REF. VALUE	NUMBER OF RESULTS > REF.
Benzene	ug/L	5	1	200 D	200 D	200.0000	5	1
Bicarbonate	mg/L	4	4	600	59.8	238.9500	NR	NA
Bromoform	ug/L	5	1	9	9	9.0000	80	0
Calcium, ICAP	mg/L	4	4	10100	202	3274.0000	NR	NA
Chloride	mg/L	4	4	49.3	5.32	28.4300	250	0
Chloroform	ug/L	5	2	19	4 J	11.5000	80	0
cis-1,2-Dichloroethene	ug/L	5	2	63	39	51.0000	70	0
Gross Alpha Activity	pCi/L	4	1	7.3	7.3	7.3000	15	0
Gross Beta Activity	pCi/L	4	2	14	3.4	8.7000	50	0
Lead, ICAP	mg/L	4	0				0.015	0
Lead, PMS	mg/L	4	2	0.00231	0.00101	0.0017	0.015	0
Lithium, ICAP	mg/L	4	3	0.418	0.0267	0.1625	NR w	NA
Magnesium, ICAP	mg/L	4	4	1430	36.2	477.0500	NR	NA
Manganese, ICAP	mg/L	4	4	55.8	0.0068	14.4235	0.05	2
Mercury, CVAA	mg/L	4	1	0.000131	0.000131	0.0001	0.002	0
Methylene chloride	ug/L	5	1	29	29	29.0000	5	1
Nickel, ICAP	mg/L	4	0				0.1	0
Nickel, PMS	mg/L	4	3	0.135	0.00817	0.0723	0.1	1
Nitrate as Nitrogen	mg/L	4	4	8960	107	2872.0000	10	4
Nitrate/Nitrite as Nitrogen	mg/L	4	4	8960	107	2872.2500	10	4
Nitrite as Nitrogen	mg/L	4	2	1.26	0.053	0.6565		0
Potassium, ICAP	mg/L	4	3	36	4.18	15.2833	NR	NA
Sodium, ICAP	mg/L	4	4	219	14.3	93.9500	NR	NA
Strontium, ICAP	mg/L	4	4	77.3	1.6	21.9050	NR w	NA
Sulfate	mg/L	4	4	51.4	2.62	16.7350	250	0
Tetrachloroethene	ug/L	5	2	1600 D	13	806.5000	5	2
Total Dissolved Solids	mg/L	4	4	45900	1060	15410.0000	500	4
Total Suspended Solids	mg/L	4	1	3	3	3.0000	NR	NA
Trichloroethene	ug/L	5	2	11	5 J	8.0000	5	1
Uranium, ICAP	mg/L	4	0				0.03	0
Uranium, PMS	mg/L	4	3	0.00985	0.0011	0.0051	0.03	0
Vinyl Chloride	ug/L	5	1	3	3	3.0000	2	1

Footnote Definitions

[d] Dilution is due to sample matrix.
[e] Results should be considered estimated
[J] Estimated value.
[k] Sample concentration is greater than 4 times the spike level for this sample batch.
[w] Not a recommended analyte by the preparation method used.
[z] Analyte reported, but not required or requested; use for qualitative purposes only.

Definitions

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

Qualifier Definitions

D - Compounds identified in an analysis at a secondary dilution factor
E - Result estimated due to interferences
J - Indicates an estimated value (VOA)
J - Chemical tracer recovery is less than 50% or exceeds 125% (RAD)
N - Sample spike recovery not within control limits
X - Confirmation of GC pesticide results attempted by GC/MS but failed
z - Analyte reported, but not required or requested; use for qualitative purposes only