Table 64
Surface Water Surveillance — Inorganic Contaminants

Steel Creek–4 at Road A (EMS and SCDHEC Sampling Location)							
Parameter	**Units**	**Jan**	**Feb**	**Mar**	**April**	**May**	**June**
Sample date		1/3/96	2/8/96	3/7/96	4/10/96	5/8/96	6/13/96
Temperature	°C	10.5	8.7	15	13.7	24	25.7
pH		6.5	6.7	6.4	6.7	6.1	6.6
Dissolved oxygen	mg/L	11	13	11	10.1	8	7.9
Conductivity	µmhos/cm	73.8	70	64	65.2	70	61.4
Alkalinity	mg/L	16	15	15	16	15	17
Chemical oxygen demand	mg/L	ND	ND	ND	ND	ND	ND
Volatile solids	mg/L	ND	2	3	2	2	3
Fixed residue	mg/L	ND	3	3	3	4	5
Suspended solids	mg/L	1	5	5	5	6	8
Total dissolved solids	mg/L	49	45	46	42	46	52
Total solids	mg/L	50	50	51	47	52	60
Turbidity	NTU	1.4	1.9	3.3	1.9	2.2	3.6
Chloride	mg/L	6	6	6	6	6	6
Nitrogen-nitrate	mg/L	0.22	0.17	0.17	0.2	0.16	0.16
Nitrogen total keldahl	mg/L	0.292	0.457	0.112	ND	0.262	0.152
Nitrogen Ammonia	mg/L	0.801	ND	0.133	ND	0.226	ND
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	6	6	6	6	6	6
Total organic carbon	mg/L	3.8	2.9	3.1	4	3.6	3.2
Aluminum	mg/L			ND			0.133
Cadmium	mg/L			ND			ND
Calcium	mg/L			2.47			2.37
Chromium	mg/L			ND			ND
Copper	mg/L			0.024			ND
Iron	mg/L			0.22			0.257
Lead	mg/L			ND			ND
Magnesium	mg/L			0.795			0.862
Manganese	mg/L			0.042			0.044
Mercury	mg/L	ND	ND	ND	ND	ND	ND
Nickel	mg/L			0.01			ND
Sodium	mg/L			4.16			4.85
Zinc	mg/L			ND			ND

Table 64.
Surface Water Surveillance — Inorganic Contaminants

Steel Creek–4 at Road A (EMS and SCDHEC Sampling Location)							
Parameter	**Units**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
Sample date		7/10/96	8/8/96	9/10/96	10/9/96	11/12/96	12/10/96
Temperature	°C	27.1	28	25	22.6	12	11
pH		6.9	6.8	5.8	5.9	5.7	5.7
Dissolved oxygen	mg/L	8.2	6.8	7.2	7.3	7.1	7.2
Conductivity	µmhos/cm	67.5	71				
Alkalinity	mg/L	16	14				
Chemical oxygen demand	mg/L	ND	ND	ND	38	ND	ND
Volatile solids	mg/L	4	3				
Fixed residue	mg/L	4	3				
Suspended solids	mg/L	8	6	6	6	5	1
Total dissolved solids	mg/L	48	56				
Total solids	mg/L	56	62				
Turbidity	NTU	3.7	3				
Chloride	mg/L	6	6				
Nitrogen-nitrate	mg/L	0.15	0.06	0.18	0.2	0.16	0.17
Nitrogen total keldahl	mg/L	1.23	ND				
Nitrogen Ammonia	mg/L	ND	ND				
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	6	6				
Total organic carbon	mg/L	4	4.7	4	8.6	4.9	5.5
Aluminum	mg/L		0.159	0.238	0.211	0.136	0.22
Cadmium	mg/L		ND	ND	ND	ND	ND
Calcium	mg/L		2.76				
Chromium	mg/L		ND	ND	ND	ND	ND
Copper	mg/L		ND	0.032	ND	ND	ND
Iron	mg/L		0.432	0.609	0.449	0.219	0.258
Lead	mg/L		ND	ND	ND	ND	ND
Magnesium	mg/L		0.905				
Manganese	mg/L		0.108	0.042	0.035	0.03	0.038
Mercury	mg/L	ND	ND	ND	ND	ND	0.0002
Nickel	mg/L		ND	ND	ND	ND	ND
Sodium	mg/L		7.99				
Zinc	mg/L		0.015	0.065	0.041	ND	ND

Table 64
Surface Water Surveillance — Inorganic Contaminants

Upper Three Runs–4 at Road A (EMS and SCDHEC Sampling Location)							
Parameter	**Units**	**Jan**	**Feb**	**Mar**	**April**	**May**	**June**
Sample date		1/3/96	2/8/96	3/7/96	4/10/96	5/8/96	6/13/96
Temperature	°C	12.5	7.4	16	12.1	23	22
pH		6.7	6.6	6.3	6.6	6.2	7
Dissolved oxygen	mg/L	8.8	12.7	9.2	9.7	7.5	6.5
Conductivity	µmhos/cm	23	28	21	22	29	21.6
Alkalinity	mg/L	5	4	5	5	6	5
Chemical oxygen demand	mg/L	ND	ND	28	ND	ND	ND
Volatile solids	mg/L	1	3	5	3	7	13
Fixed residue	mg/L	2	ND	7	3	10	39
Suspended solids	mg/L	3	3	12	5	17	51
Total dissolved solids	mg/L	31	24	36	25	41	43
Total solids	mg/L	34	27	48	30	58	94
Turbidity	NTU	3.2	3.3	13	3.8	6.6	65
Chloride	mg/L	2	2	2	2	2	2
Nitrogen-nitrate	mg/L	0.23	0.25	0.2	0.23	0.27	0.28
Nitrogen total keldahl	mg/L	0.113	ND	0.108	ND	0.168	0.406
Nitrogen Ammonia	mg/L	0.518	ND	0.439	ND	0.162	ND
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	2	2	2	2	2	2
Total organic carbon	mg/L	3.9	2.3	6.5	3.4	3.9	3.5
Aluminum	mg/L			0.243			0.426
Cadmium	mg/L			ND			ND
Calcium	mg/L			1.64			1.48
Chromium	mg/L			ND			ND
Copper	mg/L			0.036			ND
Iron	mg/L			0.49			0.81
Lead	mg/L			ND			ND
Magnesium	mg/L			0.362			0.384
Manganese	mg/L			ND			0.035
Mercury	mg/L	ND	ND	ND	ND	ND	ND
Nickel	mg/L			0.012			ND
Sodium	mg/L			0.41			0.62
Zinc	mg/L			ND			ND

Table 64
Surface Water Surveillance — Inorganic Contaminants

Upper Three Runs–4 at Road A (EMS and SCDHEC Sampling Location)							
Parameter	**Units**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
Sample date		7/10/96	8/8/96	9/10/96	10/8/96	11/14/96	12/10/96
Temperature	°C	23.5	23	23	21.8	12	11.3
pH		6.1	6.4	6	6.1	6.1	6.2
Dissolved oxygen	mg/L	7.8	7.8	7.1	7.2	7	7.2
Conductivity	µmhos/cm	21.3	28.5				
Alkalinity	mg/L	5	5				
Chemical oxygen demand	mg/L	ND	ND	ND	25	ND	ND
Volatile solids	mg/L	5	5				
Fixed residue	mg/L	8	9				
Suspended solids	mg/L	12	14	12	19	7	5
Total dissolved solids	mg/L	37	38				
Total solids	mg/L	49	52				
Turbidity	NTU	6.1	7.4				
Chloride	mg/L	2	2				
Nitrogen-nitrate	mg/L	0.25	0.13	0.25	0.25	0.23	0.26
Nitrogen total keldahl	mg/L	2.88	ND				
Nitrogen Ammonia	mg/L	ND	ND				
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	2	1				
Total organic carbon	mg/L	3.2	4.6	2.9	6.3	4	3.8
Aluminum	mg/L		0.281	0.161	0.505	0.144	0.156
Cadmium	mg/L		ND	ND	ND	ND	ND
Calcium	mg/L		1.75				
Chromium	mg/L		ND	ND	ND	ND	ND
Copper	mg/L		ND	ND	ND	ND	ND
Iron	mg/L		0.61	0.534	0.993	0.406	0.262
Lead	mg/L		ND	ND	ND	ND	ND
Magnesium	mg/L		0.409				
Manganese	mg/L		0.031	0.025	0.035	0.018	0.014
Mercury	mg/L	ND	ND	ND	ND	ND	ND
Nickel	mg/L		ND	ND	ND	ND	ND
Sodium	mg/L		3.71				
Zinc	mg/L		0.027	0.009	0.048	ND	ND

Table 64
Surface Water Surveillance — Inorganic Contaminants

Four Mile Creek at Road A7 (EMS and SCDHEC Sampling Location)							
Parameter	**Units**	**Jan**	**Feb**	**Mar**	**April**	**May**	**June**
Sample date		1/3/96	2/8/96	3/7/96	4/10/96	5/8/96	6/13/96
Temperature	°C	13.6	6.5	16.8	10.1	23	21.7
pH		6.3	6.6	6.2	6.7	6.2	6.6
Dissolved oxygen	mg/L	8.8	13	8	10.8	7	7.3
Conductivity	µmhos/cm	70.9	72	48.5	81	79	63.1
Alkalinity	mg/L	9	8	7	13	16	8
Chemical oxygen demand	mg/L	ND	ND	20	ND	ND	ND
Volatile solids	mg/L	1	2	12	2	8	5
Fixed residue	mg/L	4	1	33	2	19	19
Suspended solids	mg/L	4	3	45	4	26	24
Total dissolved solids	mg/L	57	55	50	56	69	60
Total solids	mg/L	61	58	95	60	95	84
Turbidity	NTU	3.8	2	55	3.2	18	28
Chloride	mg/L	4	4	2	4	3	2
Nitrogen-nitrate	mg/L	2.9	2.89	2.16	3.69	2.55	3
Nitrogen total keldahl	mg/L	0.331	ND	0.316	ND	0.319	0.493
Nitrogen Ammonia	mg/L	0.267	ND	0.142	0.100	0.266	ND
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	7	7	4	5	6	5
Total organic carbon	mg/L	2.7	1.6	4.2	2	4.7	3.2
Aluminum	mg/L			0.599			0.607
Cadmium	mg/L			ND			ND
Calcium	mg/L			2.94			3.31
Chromium	mg/L			ND			ND
Copper	mg/L			ND			ND
Iron	mg/L			1.24			1.46
Lead	mg/L			ND			ND
Magnesium	mg/L			0.712			0.762
Manganese	mg/L			ND			0.14
Mercury	mg/L	ND	ND	ND	ND	ND	ND
Nickel	mg/L			ND			0.011
Sodium	mg/L			6.16			9.14
Zinc	mg/L			ND			ND

Table 64
Surface Water Surveillance — Inorganic Contaminants

Four Mile Creek at Road A7 (EMS and SCDHEC Sampling Location)							
Parameter	**Units**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
Sample date		7/10/96	8/8/96				
Temperature	°C	23.3	24.7				
pH		7	6.5				
Dissolved oxygen	mg/L	6.8	6.6				
Conductivity	µmhos/cm	89	80.2				
Alkalinity	mg/L	19	14				
Chemical oxygen demand	mg/L	ND	ND				
Volatile solids	mg/L	2	3				
Fixed residue	mg/L	7	4				
Suspended solids	mg/L	9	7				
Total dissolved solids	mg/L	78	66				
Total solids	mg/L	87	73				
Turbidity	NTU	6.5	6				
Chloride	mg/L	4	4				
Nitrogen-nitrate	mg/L	2.87	2.95				
Nitrogen total keldahl	mg/L	3.79	0.619				
Nitrogen Ammonia	mg/L	ND	ND				
Phosphate P	mg/L	ND	ND				
Sulfate	mg/L	6	5				
Total organic carbon	mg/L	3.5	3.4				
Aluminum	mg/L		0.212				
Cadmium	mg/L		ND				
Calcium	mg/L		2.96				
Chromium	mg/L		ND				
Copper	mg/L		0.045				
Iron	mg/L		0.844				
Lead	mg/L		ND				
Magnesium	mg/L		0.548				
Manganese	mg/L		0.068				
Mercury	mg/L	ND	ND				
Nickel	mg/L		ND				
Sodium	mg/L		13.5				
Zinc	mg/L		0.056				

Table 64
Surface Water Surveillance — Inorganic Contaminants

Crouch Branch							
Parameter	**Units**	**Jan**	**Feb**	**Mar**	**April**	**May**	**June**
Sample date		1/3/96	2/8/96	3/7/96	4/10/96	5/8/96	6/13/96
Temperature	°C	16	8	18	14.5	20	23.3
pH		6.2	5.4	6.4	6.2	6.3	6.4
Dissolved oxygen	mg/L	7.2	8.4	6.6	8.5	7.2	NC
Conductivity	µmhos/cm	50	43.3	40	22	25	43.3
Turbidity	NTU	6.6	13	130	3.4	7.1	29
Suspended solids	mg/L	4	6	76	4	7	16

Table 64
Surface Water Surveillance — Inorganic Contaminants

Crouch Branch							
Parameter	**Units**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
Sample date		7/10/96	8/8/96				
Temperature	°C	22.2	24.8				
pH		6	5.6				
Dissolved oxygen	mg/L	6.8	5.2				
Conductivity	µmhos/cm	40.3	39.5				
Turbidity	NTU	8.7	12				
Suspended solids	mg/L	9	5				

Table 64
Surface Water Surveillance — Inorganic Contaminants

Lower Three Runs–2

Parameter	Units	Jan	Feb	Mar	April	May	June
Sample date		1/3/96	2/8/96	3/7/96	4/10/96	5/8/96	6/13/96
Temperature	°C	16	11	17	14	20	21
pH		6.2	6.3	6.4	6.9	7	6.2
Dissolved oxygen	mg/L	8.5	10.6	6.4	9.9	9.8	NC
Conductivity	µmhos/cm	60	63.9	60	120	120	76.3
Alkalinity	mg/L	25	25	23	4	3	33
Chemical oxygen demand	mg/L	21	ND	20	ND	ND	ND
Volatile solids	mg/L	ND	3	4	5	3	11
Fixed residue	mg/L	2	ND	4	3	7	13
Suspended solids	mg/L	2	3	8	8	10	24
Total dissolved solids	mg/L	57	60	54	18	60	61
Total solids	mg/L	59	63	62	26	70	85
Turbidity	NTU	1.9	1.2	5.6	3.3	6.1	9.8
Chloride	mg/L	4	4	3	3	2	3
Nitrogen-nitrate	mg/L	0.26	0.24	0.19	0.3	0.33	0.26
Nitrogen Ammonia	mg/L	0.333	ND	ND	ND	ND	ND
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	2	2	2	1	1	3
Total organic carbon	mg/L						
Aluminum	mg/L			ND			0.521
Cadmium	mg/L			ND			ND
Calcium	mg/L			8.42			12.6
Chromium	mg/L			ND			ND
Copper	mg/L			0.019			0.017
Iron	mg/L			0.472			1.3
Lead	mg/L			ND			ND
Magnesium	mg/L			0.672			0.837
Manganese	mg/L			ND			0.288
Mercury	mg/L	ND	ND	ND	ND	ND	ND
Nickel	mg/L			ND			ND
Sodium	mg/L			1.47			7.46
Zinc	mg/L			ND			ND

Table 64
Surface Water Surveillance — Inorganic Contaminants

Lower Three Runs–2

Parameter	Units	July	Aug	Sept	Oct	Nov	Dec
Sample date		7/10/96	8/8/96	9/10/96	10/8/96	11/14/96	12/10/96
Temperature	°C	22.1	27	24.2	22.1	10	9.6
pH		6	6	6.2	6.2	6	6.1
Dissolved oxygen	mg/L	7.3	6.1	5.9	6.1	5.8	6
Conductivity	µmhos/cm	94	82.1				
Alkalinity	mg/L	38	30				
Chemical oxygen demand	mg/L	ND	ND	ND	47	ND	ND
Volatile solids	mg/L	4	4	6	12	3	4
Fixed residue	mg/L	3	2	4	5	2	ND
Suspended solids	mg/L	7	6	10	17	5	4
Total dissolved solids	mg/L	68	59	63	71	42	72
Total solids	mg/L	75	65	73	88	47	76
Turbidity	NTU	3.4	2.9				
Chloride	mg/L	3	3				
Nitrogen-nitrate	mg/L	0.28	0.25	0.26	0.18	0.17	0.22
Nitrogen Ammonia	mg/L	ND	ND				
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	2	2				
Total organic carbon	mg/L			4.1	16.2	5.7	4.6
Aluminum	mg/L		0.442	0.228	0.445	0.066	0.288
Cadmium	mg/L		ND	ND	ND	ND	ND
Calcium	mg/L		12.5				
Chromium	mg/L		ND	ND	ND	ND	ND
Copper	mg/L		ND	0.014	ND	ND	ND
Iron	mg/L		1.54	0.605	0.664	0.803	0.279
Lead	mg/L		ND	ND	ND	ND	ND
Magnesium	mg/L		0.61				
Manganese	mg/L		0.349	0.061	0.105	0.199	0.06
Mercury	mg/L	ND	ND	ND	ND	0.0002	0.0005
Nickel	mg/L		ND	ND	ND	ND	0.012
Sodium	mg/L		4.37				
Zinc	mg/L		0.022	0.01	0.037	ND	0.023

Table 64
Surface Water Surveillance — Inorganic Contaminants

McQueens Branch

Parameter	Units	Jan	Feb	Mar	April	May	June
Sample date		1/3/96	2/8/96	3/7/96	4/10/96	5/8/96	6/13/96
Temperature	°C	16	9	17	14	20	20.9
pH		6	6.1	6.3	6.7	6.7	6.2
Dissolved oxygen	mg/L	8.7	8.5	6.7	9	9	NC
Conductivity	µmhos/cm	40	47.6	50	36	42	43.1
Turbidity	NTU	6.4	6.9	150	4.5	5.3	40
Suspended solids	mg/L	6	5	93	2	5	19

Table 64
Surface Water Surveillance — Inorganic Contaminants

McQueens Branch							
Parameter	**Units**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
Sample date		7/10/96	8/8/96				
Temperature	°C	21.3	23.1				
pH		6.4	6.3				
Dissolved oxygen	mg/L	8.9	4.8				
Conductivity	µmhos/cm	45	69.2				
Turbidity	NTU	7	15				
Suspended solids	mg/L	7	6				

Table 64
Surface Water Surveillance — Inorganic Contaminants

Pen Branch–3							
Parameter	**Units**	**Jan**	**Feb**	**Mar**	**April**	**May**	**June**
Sample date		1/3/96	2/8/96	3/7/96	4/10/96	5/8/96	6/13/96
Temperature	°C	16	10	16	10	22	22.6
pH		6.5	6	6.3	6.4	6.5	6.1
Dissolved oxygen	mg/L	8.2	8.9	6.6	9.9	9.4	NC
Conductivity	µmhos/cm	60	55.5	50	61	65	58.8
Alkalinity	mg/L	10	14	12	18	1	12
Chemical oxygen demand	mg/L	ND	ND	27	ND	ND	ND
Volatile solids	mg/L	4	3	7	4	5	5
Fixed residue	mg/L	2	3	20	4	9	4
Suspended solids	mg/L	6	6	27	7	14	8
Total dissolved solids	mg/L	50	53	58	50	62	55
Total solids	mg/L	56	59	85	57	76	63
Turbidity	NTU	2.9	11	18	11	13	6.1
Chloride	mg/L	4	4	4	5	5	4
Nitrogen-nitrate	mg/L	1.71	0.24	0.29	0.31	0.37	1.28
Nitrogen Ammonia	mg/L	0.426	0.114	ND	0.119	ND	ND
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	5	7	6	5	5	5
Total organic carbon	mg/L						
Aluminum	mg/L			0.303			0.74
Cadmium	mg/L			ND			ND
Calcium	mg/L			4.44			5.24
Chromium	mg/L			ND			ND
Copper	mg/L			0.023			0.016
Iron	mg/L			0.827			1.46
Lead	mg/L			ND			ND
Magnesium	mg/L			0.9			1.21
Manganese	mg/L			0.041			0.13
Mercury	mg/L	ND	ND	ND	ND	ND	ND
Nickel	mg/L			ND			ND
Sodium	mg/L			4.88			11.1
Zinc	mg/L			ND			ND

Table 64
Surface Water Surveillance — Inorganic Contaminants

Pen Branch–3							
Parameter	**Units**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
Sample date		7/10/96	8/8/96	9/10/96	10/8/96	11/12/96	12/10/96
Temperature	°C	23.5	27.8	25	22.9	12	11.2
pH		6.1	5.9	6.2	6.4	6.4	6.6
Dissolved oxygen	mg/L	9.5	5.8	7.7	7.7	7.5	7.6
Conductivity	µmhos/cm	76.4	76.4				
Alkalinity	mg/L	18	18				
Chemical oxygen demand	mg/L	ND	ND	ND	28	ND	ND
Volatile solids	mg/L	2	4				
Fixed residue	mg/L	6	4				
Suspended solids	mg/L	7	8	7	13	5	1
Total dissolved solids	mg/L	63	63				
Total solids	mg/L	70	71				
Turbidity	NTU	5.6	5				
Chloride	mg/L	6	6				
Nitrogen-nitrate	mg/L	0.41	0.38	0.28	0.35	0.35	0.31
Nitrogen Ammonia	mg/L	0.178	ND				
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	7	7				
Total organic carbon	mg/L			3.2		4	4.9
Aluminum	mg/L		0.792	0.222	0.262	0.1	0.316
Cadmium	mg/L		ND	ND	ND	ND	ND
Calcium	mg/L		5.7				
Chromium	mg/L		ND	ND	ND	ND	ND
Copper	mg/L		ND	0.013	ND	ND	ND
Iron	mg/L		1.7	0.634	1.45	0.467	0.476
Lead	mg/L		0.003	ND	ND	ND	ND
Magnesium	mg/L		1.12				
Manganese	mg/L		0.176	0.042	0.1	0.027	0.035
Mercury	mg/L	ND	ND	ND	ND	ND	ND
Nickel	mg/L		ND	ND	ND	ND	0.015
Sodium	mg/L		9.35				
Zinc	mg/L		0.03	0.032	0.022	ND	0.021

Table 64
Surface Water Surveillance — Inorganic Contaminants

Four Mile Creek–6							
Parameter	**Units**	**Jan**	**Feb**	**Mar**	**April**	**May**	**June**
Sample date		1/3/96	2/8/96	3/7/96	4/10/96	5/8/96	6/13/96
Temperature	°C	14	10	17	10	22	22
pH		6.8	6.1	5.8	6.5	6.7	6.1
Dissolved oxygen	mg/L	8.7	8.8	6.7	8.9	9	NC
Conductivity	µmhos/cm	60	54.6	50	60	66	75
Alkalinity	mg/L	11	10	7	13	16	19
Chemical oxygen demand	mg/L	ND	ND	22	ND	ND	ND
Volatile solids	mg/L	2	5	10	3	4	6
Fixed residue	mg/L	5	1	21	ND	5	9
Suspended solids	mg/L	6	6	30	4	9	15
Total dissolved solids	mg/L	49	49	42	46	64	63
Total solids	mg/L	55	55	72	50	73	78
Turbidity	NTU	3.6	2.9	20	3.4	5.8	9.2
Chloride	mg/L	4	4	3	4	4	6
Nitrogen-nitrate	mg/L	1.73	1.49	0.87	1.59	1.53	0.38
Nitrogen Ammonia	mg/L	0.392	0.159	0.102	0.120	ND	ND
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	5	5	4	4	5	7
Total organic carbon	mg/L						
Aluminum	mg/L			ND			0.338
Cadmium	mg/L			ND			ND
Calcium	mg/L			2.62			3.17
Chromium	mg/L			ND			ND
Copper	mg/L			0.021			ND
Iron	mg/L			0.608			1.08
Lead	mg/L			ND			ND
Magnesium	mg/L			0.528			0.786
Manganese	mg/L			ND			0.118
Mercury	mg/L	ND	ND	ND	ND	ND	ND
Nickel	mg/L			ND			ND
Sodium	mg/L			5.08			6.56
Zinc	mg/L			ND			ND

Table 64
Surface Water Surveillance — Inorganic Contaminants

Four Mile Creek–6

Parameter	Units	July	Aug	Sept	Oct	Nov	Dec
Sample date		7/10/96	8/8/96	9/10/96	10/8/96	11/12/96	12/10/96
Temperature	°C	23.7	26.9	26	23.9	11	10.6
pH		6.5	5.7	6.3	6.4	6.4	6.5
Dissolved oxygen	mg/L	8.6	5.4	7.8	8	7.6	7.7
Conductivity	µmhos/cm	75.5	67.7				
Alkalinity	mg/L	17	15				
Chemical oxygen demand	mg/L	ND	ND	ND	22	ND	ND
Volatile solids	mg/L	2	2				
Fixed residue	mg/L	4	2				
Suspended solids	mg/L	6	4	4	8	4	1
Total dissolved solids	mg/L	61	71				
Total solids	mg/L	67	75				
Turbidity	NTU	4.6	2.8				
Chloride	mg/L	4	4				
Nitrogen-nitrate	mg/L	1.18	0.99	1.99	1.11	1.93	1.55
Nitrogen Ammonia	mg/L	ND	ND				
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	8	4				
Total organic carbon	mg/L			1.5		2.8	4.7
Aluminum	mg/L		0.216	0.151	0.211	0.084	0.201
Cadmium	mg/L		ND	ND	ND	ND	ND
Calcium	mg/L		3.02				
Chromium	mg/L		ND	ND	ND	ND	ND
Copper	mg/L		ND	0.008	ND	ND	ND
Iron	mg/L		0.703	0.631	0.925	0.316	0.543
Lead	mg/L		ND	ND	ND	ND	ND
Magnesium	mg/L		0.664				
Manganese	mg/L		0.078	0.018	0.054	0.019	0.046
Mercury	mg/L	0.0003	ND	ND	ND	ND	ND
Nickel	mg/L		ND	ND	ND	ND	0.01
Sodium	mg/L		8.96				
Zinc	mg/L		0.026	0.008	0.088	ND	ND

Table 64
Surface Water Surveillance — Inorganic Contaminants

Upper Three Runs–1A							
Parameter	**Units**	**Jan**	**Feb**	**Mar**	**April**	**May**	**June**
Sample date		1/3/96	2/8/96	3/7/96	4/10/96	5/8/96	6/13/96
Temperature	°C	14	12	17	13.7	20	20
pH		5.8	6.1	5.3	6.6	6.8	6.4
Dissolved oxygen	mg/L	8.9	9.4	7.3	10.2	9.6	n/a
Conductivity	µmhos/cm	40	19.8	30	130	140	18.7
Alkalinity	mg/L	3	2	2	4	3	3
Chemical oxygen demand	mg/L	ND	ND	25	ND	ND	ND
Volatile solids	mg/L	4	4	7	5	6	8
Fixed residue	mg/L	7	ND	9	ND	5	7
Suspended solids	mg/L	11	4	15	5	11	15
Total dissolved solids	mg/L	27	24	32	21	27	32
Total solids	mg/L	38	28	47	26	38	47
Turbidity	NTU	6.8	1.6	11	2.9	6.2	10
Chloride	mg/L	2	2	2	3	2	2
Nitrogen-nitrate	mg/L	0.3	0.34	0.26	0.3	0.32	0.032
Nitrogen Ammonia	mg/L	0.340	0.197	ND	0.106	0.339	ND
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	1	1	1	1	1	1
Total organic carbon	mg/L						
Aluminum	mg/L			ND			0.106
Cadmium	mg/L			ND			ND
Calcium	mg/L			0.34			0.479
Chromium	mg/L			ND			ND
Copper	mg/L			0.021			0.024
Iron	mg/L			0.187			0.341
Lead	mg/L			ND			ND
Magnesium	mg/L			0.187			0.393
Manganese	mg/L			ND			ND
Mercury	mg/L	ND	ND	ND	ND	ND	ND
Nickel	mg/L			ND			ND
Sodium	mg/L			ND			1.54
Zinc	mg/L			ND			ND

Table 64
Surface Water Surveillance — Inorganic Contaminants

Upper Three Runs–1A							
Parameter	**Units**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
Sample date		7/10/96	8/8/96	9/10/96	10/8/96	11/14/96	12/10/96
Temperature	°C	21.3	21.8	20.8	16.7	10	9.8
pH		6.5	5.5	5.8	5.7	5.8	6
Dissolved oxygen	mg/L	10	5.2	7.6	7.8	7.5	7.7
Conductivity	µmhos/cm	15.5	22.1				
Alkalinity	mg/L	4	3				
Chemical oxygen demand	mg/L	ND	ND	ND	30	ND	ND
Volatile solids	mg/L	3	4				
Fixed residue	mg/L	5	3				
Suspended solids	mg/L	8	6	8	13	6	2
Total dissolved solids	mg/L	27	32				
Total solids	mg/L	35	38				
Turbidity	NTU	3.6	2.7				
Chloride	mg/L	3	2				
Nitrogen-nitrate	mg/L	0.34	0.21	0.34	0.28	0.35	0.38
Nitrogen Ammonia	mg/L	ND	ND				
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	1	1				
Total organic carbon	mg/L			2.5	5.1	3	4.3
Aluminum	mg/L		0.098	0.248	0.387	ND	0.188
Cadmium	mg/L		ND	ND	ND	ND	ND
Calcium	mg/L		0.483				
Chromium	mg/L		ND	ND	ND	ND	ND
Copper	mg/L		ND	0.024	ND	ND	0.013
Iron	mg/L		0.284	0.746	0.664	0.329	0.221
Lead	mg/L		ND	ND	0.004	ND	ND
Magnesium	mg/L		0.33				
Manganese	mg/L		0.01	0.013	0.016	ND	0.011
Mercury	mg/L	ND	ND	ND	ND	ND	ND
Nickel	mg/L		ND	ND	ND	ND	0.013
Sodium	mg/L		2.53				
Zinc	mg/L		0.028	0.061	0.094	ND	0.013

Table 64
Surface Water Surveillance — Inorganic Contaminants

Beaver Dam Creek (400–D)							
Parameter	**Units**	**Jan**	**Feb**	**Mar**	**April**	**May**	**June**
Sample date							
Temperature	°C						
pH							
Dissolved oxygen	mg/L						
Chemical oxygen demand	mg/L						
Total suspended solids	mg/L						
Nitrogen-nitrate	mg/L						
Phosphate P	mg/L						
Total organic carbon	mg/L						
Aluminum	mg/L						
Cadmium	mg/L						
Chromium	mg/L						
Copper	mg/L						
Iron	mg/L						
Lead	mg/L						
Manganese	mg/L						
Mercury	mg/L						
Nickel	mg/L						
Zinc	mg/L						

Table 64
Surface Water Surveillance — Inorganic Contaminants

Beaver Dam Creek (400–D)							
Parameter	**Units**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
Sample date				9/10/96	10/8/96	11/14/96	12/10/96
Temperature	°C			27	25.2	11	10.6
pH				6.2	6.3	6.2	6.2
Dissolved oxygen	mg/L			7.7	7.8	7.6	7.7
Chemical oxygen demand	mg/L			ND	21	ND	ND
Total suspended solids	mg/L			21	29	6	4
Nitrogen-nitrate	mg/L			0.32	0.34	0.4	0.39
Phosphate P	mg/L			ND	ND	ND	ND
Total organic carbon	mg/L			2.7	3.7	4.7	5
Aluminum	mg/L			0.297	0.996	0.315	0.417
Cadmium	mg/L			ND	ND	ND	ND
Chromium	mg/L			ND	ND	ND	ND
Copper	mg/L			ND	ND	ND	0.026
Iron	mg/L			0.572	1.6	0.557	0.495
Lead	mg/L			ND	ND	ND	ND
Manganese	mg/L			0.131	0.198	0.068	0.057
Mercury	mg/L			ND	0.0001	ND	ND
Nickel	mg/L			ND	ND	ND	ND
Zinc	mg/L			ND	0.054	ND	0.022

Table 64
Surface Water Surveillance — Inorganic Contaminants

Four Mile Creek–2

Parameter	Units	Jan	Feb	Mar	April	May	June
Sample date							
Temperature	°C						
pH							
Dissolved oxygen	mg/L						
Chemical oxygen demand	mg/L						
Total suspended solids	mg/L						
Nitrogen-nitrate	mg/L						
Phosphate P	mg/L						
Total organic carbon	mg/L						
Aluminum	mg/L						
Cadmium	mg/L						
Chromium	mg/L						
Copper	mg/L						
Iron	mg/L						
Lead	mg/L						
Manganese	mg/L						
Mercury	mg/L						
Nickel	mg/L						
Zinc	mg/L						

Table 64
Surface Water Surveillance — Inorganic Contaminants

Four Mile Creek–2							
Parameter	**Units**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
Sample date				9/10/96	10/8/96	11/14/96	12/10/96
Temperature	°C			23.7	21.6	11	10.6
pH				5.6	5.5	5.6	5.5
Dissolved oxygen	mg/L			6.8	7	7.2	7
Chemical oxygen demand	mg/L			ND	20	ND	ND
Total suspended solids	mg/L			8	11	23	19
Nitrogen-nitrate	mg/L			0.63	0.31	0.72	0.77
Phosphate P	mg/L			ND	ND	ND	ND
Total organic carbon	mg/L			3	6.7	4.2	3.6
Aluminum	mg/L			0.191	0.504	0.673	0.566
Cadmium	mg/L			ND	ND	ND	ND
Chromium	mg/L			ND	ND	ND	ND
Copper	mg/L			0.006	ND	ND	0.009
Iron	mg/L			1.46	1.84	2.49	1.15
Lead	mg/L			ND	ND	ND	ND
Manganese	mg/L			0.179	0.079	0.072	0.122
Mercury	mg/L			ND	ND	ND	ND
Nickel	mg/L			ND	ND	ND	ND
Zinc	mg/L			0.016	0.064	ND	0.033

Table 64
Surface Water Surveillance — Inorganic Contaminants

Four Mile Creek–2B

Parameter	Units	Jan	Feb	Mar	April	May	June
Sample date							
Temperature	°C						
pH							
Dissolved oxygen	mg/L						
Chemical oxygen demand	mg/L						
Total suspended solids	mg/L						
Nitrogen-nitrate	mg/L						
Phosphate P	mg/L						
Total organic carbon	mg/L						
Aluminum	mg/L						
Cadmium	mg/L						
Chromium	mg/L						
Copper	mg/L						
Iron	mg/L						
Lead	mg/L						
Manganese	mg/L						
Mercury	mg/L						
Nickel	mg/L						
Zinc	mg/L						

Table 64
Surface Water Surveillance — Inorganic Contaminants

Four Mile Creek–2B

Parameter	Units	July	Aug	Sept	Oct	Nov	Dec
Sample date				9/10/96	10/8/96	11/14/96	12/10/96
Temperature	°C			25	23	11	10.6
pH				5.6	5.5	5.4	5.6
Dissolved oxygen	mg/L			3.2	8.5	7.5	7.4
Chemical oxygen demand	mg/L			20	21	ND	ND
Total suspended solids	mg/L			18	11	2	13
Nitrogen-nitrate	mg/L			0.23	0.2	0.26	0.79
Phosphate P	mg/L			ND	ND	ND	ND
Total organic carbon	mg/L			8.1	5.4	3.8	3.2
Aluminum	mg/L			0.19	0.248	ND	0.769
Cadmium	mg/L			ND	ND	ND	ND
Chromium	mg/L			ND	ND	ND	ND
Copper	mg/L			0.006	ND	ND	0.009
Iron	mg/L			14.5	1.6	0.435	1.22
Lead	mg/L			ND	ND	ND	ND
Manganese	mg/L			1.31	0.056	0.059	0.118
Mercury	mg/L			ND	ND	ND	ND
Nickel	mg/L			ND	ND	ND	ND
Zinc	mg/L			0.01	0.122	ND	0.039

Table 64
Surface Water Surveillance — Inorganic Contaminants

Tinker Creek–1 (TC/KP)

Parameter	Units	Jan	Feb	Mar	April	May	June
Sample date							
Temperature	°C						
pH							
Dissolved oxygen	mg/L						
Chemical oxygen demand	mg/L						
Total suspended solids	mg/L						
Nitrogen-nitrate	mg/L						
Phosphate P	mg/L						
Total organic carbon	mg/L						
Aluminum	mg/L						
Cadmium	mg/L						
Chromium	mg/L						
Copper	mg/L						
Iron	mg/L						
Lead	mg/L						
Manganese	mg/L						
Mercury	mg/L						
Nickel	mg/L						
Zinc	mg/L						

Table 64
Surface Water Surveillance — Inorganic Contaminants

Tinker Creek–1 (TC/KP)

Parameter	Units	July	Aug	Sept	Oct	Nov	Dec
Sample date				9/10/96	10/8/96	11/14/96	12/10/96
Temperature	°C			23.3	21.8	12	10.9
pH				5.7	5.7	5.5	5.6
Dissolved oxygen	mg/L			7.3	7.5	7.6	7.7
Chemical oxygen demand	mg/L			ND	21	ND	ND
Total suspended solids	mg/L			9	10	8	1
Nitrogen-nitrate	mg/L			0.19	0.17	0.19	0.19
Phosphate P	mg/L			ND	ND	ND	ND
Total organic carbon	mg/L			4.2	8	4	4.5
Aluminum	mg/L			0.11	0.249	0.083	0.08
Cadmium	mg/L			ND	ND	ND	ND
Chromium	mg/L			ND	ND	ND	ND
Copper	mg/L			ND	ND	ND	ND
Iron	mg/L			0.597	0.602	0.241	0.088
Lead	mg/L			ND	ND	ND	ND
Manganese	mg/L			0.028	0.054	0.021	0.006
Mercury	mg/L			ND	0.0003	ND	ND
Nickel	mg/L			ND	ND	ND	ND
Zinc	mg/L			ND	0.064	ND	ND

Table 64
Surface Water Surveillance — Inorganic Contaminants

RM–160 (R–2; Above SRS)

Parameter	Units	Jan	Feb	Mar	April	May	June
Sample date		1/3/96	2/6/96	3/5/96	4/9/96	5/7/96	6/11/96
Temperature	°C	10	6.5	11.3	13.3	17.1	21.5
pH		6.2	6.2	6.3	5.8	6.1	6.2
Dissolved oxygen	mg/L	10.9	11.5	10.6	10.9	9.5	8.8
Conductivity	µmhos/cm	76.8	50.8	82.6	60.9	51.1	80.1
Alkalinity	mg/L	18	14	19	17	16	20
Chemical oxygen demand	mg/L	ND	ND	ND	ND	ND	ND
Volatile solids	mg/L	1	4	3	3	3	4
Fixed residue	mg/L	7	13	6	13	17	10
Suspended solids	mg/L	8	17	9	16	20	14
Total dissolved solids	mg/L	59	51	63	55	60	72
Total solids	mg/L	67	68	72	71	80	86
Turbidity	NTU	8.2	24	14	24	21	11
Chloride	mg/L	7	4	7	5	4	6
Nitrogen-nitrate	mg/L	0.34	0.24	0.32	0.33	0.37	0.47
Nitrogen Ammonia	mg/L	0.265	ND	0.119	0.115	ND	ND
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	6	4	6	5	4	8
Total organic carbon	mg/L						
Aluminum	mg/L			0.549			0.707
Cadmium	mg/L			ND			ND
Calcium	mg/L			2.97			2.98
Chromium	mg/L			ND			ND
Copper	mg/L			ND			ND
Iron	mg/L			1.02			1.13
Lead	mg/L			ND			ND
Magnesium	mg/L			1.33			1.25
Manganese	mg/L			ND			0.08
Mercury	mg/L	ND	ND	ND	ND	ND	ND
Nickel	mg/L			ND			ND
Sodium	mg/L			5.96			6.15
Zinc	mg/L			ND			ND

Table 64
Surface Water Surveillance — Inorganic Contaminants

RM–160 (R–2; Above SRS)

Parameter	Units	July	Aug	Sept	Oct	Nov	Dec
Sample date		7/9/96	8/6/96	9/10/96	10/8/96	11/12/96	12/10/96
Temperature	°C	22.5	24	24.3	19.6	14.3	12.1
pH		6.1	6.1	6.2	5.8	6	6.8
Dissolved oxygen	mg/L	7.9	6.4	6.7	7.7	9.4	9.4
Conductivity	µmhos/cm	88.8	90.7				
Alkalinity	mg/L	19	20				
Chemical oxygen demand	mg/L	ND	ND	ND	22	ND	ND
Volatile solids	mg/L	3	3				
Fixed residue	mg/L	7	7				
Suspended solids	mg/L	9	10	36	12	7	6
Total dissolved solids	mg/L	64	67				
Total solids	mg/L	73	76				
Turbidity	NTU	8.2	6.6				
Chloride	mg/L	9	8				
Nitrogen-nitrate	mg/L	0.44	0.27	0.29	0.31	0.38	0.36
Nitrogen Ammonia	mg/L	ND	ND				
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	9	9				
Total organic carbon	mg/L			ND	3.4	4.4	5
Aluminum	mg/L		0.268	0.227	0.327	0.145	0.152
Cadmium	mg/L		ND	ND	ND	ND	ND
Calcium	mg/L		3.79				
Chromium	mg/L		ND	ND	ND	ND	ND
Copper	mg/L		ND	ND	ND	ND	ND
Iron	mg/L		0.498	0.539	0.667	0.316	0.296
Lead	mg/L		ND	ND	ND	ND	ND
Magnesium	mg/L		1.27				
Manganese	mg/L		0.063	0.183	0.134	0.05	0.062
Mercury	mg/L	ND	ND	ND	ND	ND	0.0005
Nickel	mg/L		ND	ND	ND	ND	ND
Sodium	mg/L		12.1				
Zinc	mg/L		0.025	ND	0.029	ND	ND

Table 64
Surface Water Surveillance — Inorganic Contaminants

RM–120 (R–10; Below SRS)							
Parameter	**Units**	**Jan**	**Feb**	**Mar**	**April**	**May**	**June**
Sample date		1/3/96	2/6/96	3/5/96	4/9/96	5/7/96	6/11/96
Temperature	°C	11	5.5	11.6	13.7	20.5	21.8
pH		5.9	6.3	6.4	5.5	6.4	6.8
Dissolved oxygen	mg/L	10.1	13	9.3	9.6	9	7.2
Conductivity	µmhos/cm	93.1	90	78.7	79.3	82.4	86.6
Alkalinity	mg/L	20	14	20	20	20	20
Chemical oxygen demand	mg/L	ND	ND	ND	ND	ND	ND
Volatile solids	mg/L	2	4	3	4	4	3
Fixed residue	mg/L	7	8	8	8	19	11
Suspended solids	mg/L	8	12	11	12	23	14
Total dissolved solids	mg/L	70	60	58	61	76	69
Total solids	mg/L	78	72	69	73	99	83
Turbidity	NTU	8.8	25	14	14	21	10
Chloride	mg/L	9	4	6	7	7	8
Nitrogen-nitrate	mg/L	0.4	0.24	0.28	0.36	0.41	0.51
Nitrogen Ammonia	mg/L	0.325	ND	0.200	0.108	ND	ND
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	8	5	6	7	8	9
Total organic carbon	mg/L						
Aluminum	mg/L			0.37			0.792
Cadmium	mg/L			ND			ND
Calcium	mg/L			3.28			4.36
Chromium	mg/L			ND			ND
Copper	mg/L			ND			ND
Iron	mg/L			1.25			1.39
Lead	mg/L			ND			ND
Magnesium	mg/L			1.23			1.5
Manganese	mg/L			ND			0.078
Mercury	mg/L	ND	ND	ND	ND	ND	ND
Nickel	mg/L			ND			ND
Sodium	mg/L			6.26			9.72
Zinc	mg/L			ND			ND

Table 64
Surface Water Surveillance — Inorganic Contaminants

RM–120 (R–10; Below SRS)

Parameter	Units	July	Aug	Sept	Oct	Nov	Dec
Sample date		7/9/96	8/6/96	9/10/96	10/8/96	11/12/96	12/10/96
Temperature	°C	24.1	25.4	25.4	19.5	14.6	12.3
pH		6.1	6.1	6.2	5.8	6	7
Dissolved oxygen	mg/L	7.4	6.9	6.2	7.4	9	9.3
Conductivity	µmhos/cm	92.4	101.6				
Alkalinity	mg/L	19	21				
Chemical oxygen demand	mg/L	20	ND	ND	ND	ND	ND
Volatile solids	mg/L	3	3				
Fixed residue	mg/L	13	9				
Suspended solids	mg/L	16	12	11	12	11	9
Total dissolved solids	mg/L	73	71				
Total solids	mg/L	89	83				
Turbidity	NTU	10	10				
Chloride	mg/L	9	9				
Nitrogen-nitrate	mg/L	0.45	0.3	0.36	0.35	0.39	0.37
Nitrogen Ammonia	mg/L	ND	ND				
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	10	10				
Total organic carbon	mg/L			2.7	3.8	4.1	4.3
Aluminum	mg/L		0.335	0.314	0.564	0.259	0.16
Cadmium	mg/L		ND	ND	ND	ND	ND
Calcium	mg/L		4.01				
Chromium	mg/L		ND	ND	ND	ND	0.011
Copper	mg/L		ND	ND	ND	ND	ND
Iron	mg/L		0.723	0.678	0.891	0.565	0.387
Lead	mg/L		ND	ND	ND	ND	ND
Magnesium	mg/L		1.15				
Manganese	mg/L		0.063	0.061	0.079	0.071	0.055
Mercury	mg/L	ND	ND	ND	ND	ND	0.0003
Nickel	mg/L		ND	ND	ND	ND	ND
Sodium	mg/L		11.9				
Zinc	mg/L		0.029	0.01	0.046	0.031	0.016

Table 64
Surface Water Surveillance — Inorganic Contaminants

RM–129

Parameter	Units	Jan	Feb	Mar	April	May	June
Sample date							
Temperature	°C						
pH							
Dissolved oxygen	mg/L						
Chemical oxygen demand	mg/L						
Suspended solids	mg/L						
Nitrogen-nitrate	mg/L						
Phosphate P	mg/L						
Total organic carbon	mg/L						
Aluminum	mg/L						
Cadmium	mg/L						
Chromium	mg/L						
Copper	mg/L						
Iron	mg/L						
Lead	mg/L						
Manganese	mg/L						
Mercury	mg/L						
Nickel	mg/L						
Zinc	mg/L						

Table 64
Surface Water Surveillance — Inorganic Contaminants

RM–129

Parameter	Units	July	Aug	Sept	Oct	Nov	Dec
Sample date				9/10/96	10/8/96	11/12/96	12/10/96
Temperature	°C						
pH							
Dissolved oxygen	mg/L						
Chemical oxygen demand	mg/L			ND	21	ND	ND
Suspended solids	mg/L			10	5	4	7
Nitrogen-nitrate	mg/L			0.32	0.31	0.18	0.23
Phosphate P	mg/L			ND	ND	ND	ND
Total organic carbon	mg/L			3.7	6.8	6	5.1
Aluminum	mg/L			0.179	0.291	0.109	0.117
Cadmium	mg/L			ND	ND	ND	ND
Chromium	mg/L			ND	ND	ND	ND
Copper	mg/L			ND	ND	ND	ND
Iron	mg/L			0.507	0.51	0.4	0.398
Lead	mg/L			ND	ND	ND	ND
Manganese	mg/L			0.059	0.048	0.019	0.029
Mercury	mg/L			ND	ND	ND	0.0007
Nickel	mg/L			ND	ND	ND	ND
Zinc	mg/L			ND	0.035	ND	0.01

Table 64
Surface Water Surveillance — Inorganic Contaminants

RM–140 (R–8A)

Parameter	Units	Jan	Feb	Mar	April	May	June
Sample date							
Temperature	°C						
pH							
Dissolved oxygen	mg/L						
Chemical oxygen demand	mg/L						
Suspended solids	mg/L						
Nitrogen-nitrate	mg/L						
Phosphate P	mg/L						
Total organic carbon	mg/L						
Aluminum	mg/L						
Cadmium	mg/L						
Chromium	mg/L						
Copper	mg/L						
Iron	mg/L						
Lead	mg/L						
Manganese	mg/L						
Mercury	mg/L						
Nickel	mg/L						
Zinc	mg/L						

Table 64
Surface Water Surveillance — Inorganic Contaminants

RM–140 (R–8A)

Parameter	Units	July	Aug	Sept	Oct	Nov	Dec
Sample date				9/10/96	10/8/96	11/12/96	12/10/96
Temperature	°C						
pH							
Dissolved oxygen	mg/L						
Chemical oxygen demand	mg/L			ND	ND	ND	ND
Suspended solids	mg/L			19	11	6	6
Nitrogen-nitrate	mg/L			0.38	0.35	0.37	0.35
Phosphate P	mg/L			ND	ND	ND	ND
Total organic carbon	mg/L			2.7	3.9	4.5	5.1
Aluminum	mg/L			0.25	0.439	0.151	0.21
Cadmium	mg/L			ND	ND	ND	ND
Chromium	mg/L			ND	ND	ND	ND
Copper	mg/L			ND	ND	0.11	ND
Iron	mg/L			0.56	0.761	0.496	0.411
Lead	mg/L			ND	ND	ND	ND
Manganese	mg/L			0.109	0.098	0.102	0.058
Mercury	mg/L			ND	ND	ND	0.0013
Nickel	mg/L			ND	ND	ND	ND
Zinc	mg/L			ND	0.03	0.071	ND

Table 64
Surface Water Surveillance — Inorganic Contaminants

Vogtle (R–3B; Below Vogtle Electric Generating Plant)							
Parameter	**Units**	**Jan**	**Feb**	**Mar**	**April**	**May**	**June**
Sample date		1/3/96	2/6/96	3/5/96	4/9/96	5/7/96	6/11/96
Temperature	°C	10.9	5.7	11.7	13.3	17.8	22.4
pH		6.1	6	6.2	5.9	6.4	6.1
Dissolved oxygen	mg/L	10.4	11.3	10.2	10.3	9.6	7.9
Conductivity	µmhos/cm	87.9	50.4	80.8	69.9	60.1	99.1
Alkalinity	mg/L	19	14	20	19	17	23
Chemical oxygen demand	mg/L	ND	ND	ND	ND	ND	ND
Volatile solids	mg/L	1	5	3	4	3	5
Fixed residue	mg/L	8	12	10	20	19	16
Suspended solids	mg/L	9	16	13	24	22	20
Total dissolved solids	mg/L	66	68	68	59	54	87
Total solids	mg/L	75	84	81	83	76	107
Turbidity	NTU	8.4	31	16	24	22	15
Chloride	mg/L	8	6	6	5	4	11
Nitrogen-nitrate	mg/L	0.39	0.25	0.35	0.37	0.39	0.54
Nitrogen Ammonia	mg/L	0.293	ND	0.138	0.123	ND	ND
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	7	5	7	6	5	11
Total organic carbon	mg/L						
Aluminum	mg/L			0.763			0.899
Cadmium	mg/L			ND			ND
Calcium	mg/L			3.38			3.76
Chromium	mg/L			ND			ND
Copper	mg/L			ND			ND
Iron	mg/L			1.51			1.45
Lead	mg/L			ND			ND
Magnesium	mg/L			1.46			1.41
Manganese	mg/L			ND			0.096
Mercury	mg/L	ND	ND	ND	ND	ND	ND
Nickel	mg/L			ND			ND
Sodium	mg/L			7.36			8.68
Zinc	mg/L			ND			ND

Table 64
Surface Water Surveillance — Inorganic Contaminants

Vogtle (R–3B; Below Vogtle Electric Generating Plant)							
Parameter	**Units**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
Sample date		7/9/96	8/6/96	9/10/96	10/8/96	11/12/96	12/10/96
Temperature	°C	23.3	24.8	24.7	19.6	14.2	12
pH		6.1	5.9	6.1	5.8	5.8	6.7
Dissolved oxygen	mg/L	6.7	6.3	6	7.3	8.8	9.1
Conductivity	µmhos/cm	90.8	107.6				
Alkalinity	mg/L	20	22				
Chemical oxygen demand	mg/L	ND	ND	ND	ND	ND	ND
Volatile solids	mg/L	2	3				
Fixed residue	mg/L	7	8				
Suspended solids	mg/L	8	10	21	13	10	7
Total dissolved solids	mg/L	69	78				
Total solids	mg/L	77	88				
Turbidity	NTU	8.4	7.6				
Chloride	mg/L	8	11				
Nitrogen-nitrate	mg/L	0.47	0.29	0.37	0.31	0.39	0.37
Nitrogen Ammonia	mg/L	ND	ND				
Phosphate P	mg/L	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	9	11				
Total organic carbon	mg/L			2	3.3	4.4	4.3
Aluminum	mg/L		0.425	0.254	0.373	0.182	0.137
Cadmium	mg/L		ND	ND	ND	ND	ND
Calcium	mg/L		4.18				
Chromium	mg/L		ND	ND	ND	ND	ND
Copper	mg/L		ND	ND	ND	ND	ND
Iron	mg/L		0.66	0.505	0.68	0.606	0.299
Lead	mg/L		ND	ND	ND	ND	ND
Magnesium	mg/L		1.3				
Manganese	mg/L		0.06	0.116	0.114	0.101	0.059
Mercury	mg/L	ND	ND	ND	ND	ND	0.0005
Nickel	mg/L		ND	ND	ND	ND	ND
Sodium	mg/L		13				
Zinc	mg/L		0.025	ND	0.051	ND	ND

Table 64
Surface Water Surveillance — Inorganic Contaminants

Notes: 1. *"ND" denotes "not detected"; "NC" means "not collected."*
2. Fecal coliform results can be found in table 67 on page 240.
3. Program changes that began in September resulted in additions/deletions of some sampling locations. Discontinued stream locations were 4M–A7, Crouch Branch, and McQueen's Branch; new stream locations are Beaver Dam Creek, Four Mile Creek–2, Four Mile Creek–2B, and Tinker Creek @ Kennedy Pond. New river locations are RM–129 and RM–140.
4. Program changes that began in September also resulted in elimination of some field measurements and analyses for certain parameters. Frequency of sampling also changed for some parameters.
5. Until September, metals (except mercury) were analyzed quarterly from monthly grab composites. Mercury was analyzed monthly from grab samples. Beginning in September, all metals (including mercury) were analyzed monthly from grab samples.

Table 65.
Surface Water Surveillance — Pesticides, Herbicides, and Volatile Organic Compounds

Notes: 1. EMS samples from the following SCDHEC locations were analyzed monthly for the constituents listed below. Practical quantification limits (PQLs) listed are achieved for pure water in ideal laboratory conditions. Actual PQLs reported to Westinghouse Savannah River Company by the laboratory may vary because of impurities in the water, instrument variations, sample volume size, and/or sample dilution factors.
2. Fourth-quarter samples were inadvertently not collected in 1996.

	Practical Quantification Limit (µg/L)	µg/L			
		Tims Branch–5	Four Mile Creek–A7	Steel Creek–4	Upper Three Runs Creek–4 at Road A
Pesticides					
Aldrin	0.05	<0.05	<0.05	<0.05	<0.05
Alpha–BHC	0.05	<0.05	<0.05	<0.05	<0.05
Beta–BHC	0.05	<0.05	<0.05	<0.05	<0.05
Delta–BHC	0.05	<0.05	<0.05	<0.05	<0.05
Lindane	0.05	<0.05	<0.05	<0.05	<0.05
Chlordane	0.50	<0.50	<0.50	<0.50	<0.50
4,4–DDD	0.05	<0.05	<0.05	<0.05	<0.05
4,4–DDE	0.05	<0.05	<0.05	<0.05	<0.05
4,4–DDT	0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	0.05	<0.05	<0.05[a]	<0.05	<0.05
Endosulfan I	0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	0.05	<0.05	<0.05	<0.05	<0.05
Endrin	0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	0.05	0.052	<0.05	<0.05	<0.05
Heptachlor epoxide	0.05	0.052	<0.05	<0.05	<0.05
Methoxychlor	0.20	0.52	<0.20	<0.20	<0.20
Toxaphene	5.00	5.2	<5.00	4.8	<5.00
Herbicides					
2,4–D	0.10	<0.10	<0.10	<0.10	<0.10
2,4, 5–TP (Silvex)	0.10	<0.10	<0.10	<0.10	0.28
Volatile Organic Compounds					
Tetrachloroethene	2.0	3.4	<2.0	<2.0	3.7
111–Trichloroethane	2.0	<2.0	<2.0	<2.0	<2.0
Trichloroethene	2.0	<2.0	<2.0	<2.0	<2.0

a Dieldrin was found at a level of 0.154 µg/L in a sample taken September 24 at Four Mile–A7. This was the only analysis above detection during the year.

Table 66
Surface Water Surveillance —
Georgia Department of Natural Resources and EMS Sampling Location 681–5G

Parameter	Units	June
Notes: 1. "ND" denotes "none detected."		
2. All analyses were analyzed from grab samples.		
3. This location has been sampled monthly by the Georgia Department of Natural Resources and twice yearly by the Environmental Monitoring Section. However, samples were collected by EMS only once during 1996. After program changes that began September 1, this collection site was dropped.		
pH		7.09
Alkalinity	mg/L	21
Chemical Oxygen Demand	mg/L	ND
Volatile Solids	mg/L	4
Fixed Residue	mg/L	12
Suspended Solids	mg/L	16
Total Dissolved Solids	mg/L	74
Total Solids	mg/L	90
Turbidity	NTU	13
Chloride	mg/L	8
Nitrogen–Nitrate	mg/L	0.48
Phosphate P	mg/L	ND
Sulfate	mg/L	10
Aluminum	mg/L	0.04
Cadmium	mg/L	ND
Calcium	mg/L	3.53
Chromium	mg/L	ND
Copper	mg/L	ND
Iron	mg/L	0.729
Lead	mg/L	ND
Magnesium	mg/L	1.13
Manganese	mg/L	0.072
Nickel	mg/L	ND
Sodium	mg/L	8.94
Zinc	mg/L	ND

Table 67
Surface Water Surveillance — Fecal Coliform Bacteria Exceedances

Date	Location	Number of Counts
Notes:	*1. Fecal coliform bacteria counts are collected at the following locations: River–120, Vogtle Discharge, River–160, U3R–1A, U3R–4, FM–6, PB–3, 400–D, L3R–3, L3R–TCR, SC–4, TB–5, and FM–A7.*	
	2. The standard for South Carolina states that the fecal coliform count should not exceed a geometric mean of 200/100 mL, based on five samples during any 30-day period, nor shall more than 10 percent of the samples during any consecutive 30-day period exceed 400/100 mL.	
	3. The following ambient quality data did not achieve the standards prescribed for primary and secondary recreational waters.	
1/30/96	Vogtle Discharge	600/100
1/30/96	RM 160	300/100
1/30/96	400–D	800/100
1/30/96	RM 120	1100/100
3/7/96	TB–5	700/100
3/7/96	FM–A7	670/100
3/7/96	U3R–4	1100/100
4/1/96	U3R–1	700/100
4/29/96	U3R–1	>6000/100
4/30/96	L3R–3	590/100
4/30/96	PB–3	800/100
4/30/96	FM–6	1200/100
4/30/96	U3R–4	2200/100
5/28/96	U3R–4	2000/100
5/28/96	FM–6	627/100
5/28/96	L3R–3	2200/100
6/13/96	FM–A7	2600/100
6/13/96	U3R–4	1200/100
10/17/96	FM–A7	400/100
12/3/96	U3R–4	1100/100

Table 68
Sediment Surveillance — Pesticides and Herbicides

	Upper Three Runs–4	Four Mile Creek–6	Pen Branch–3	Steel Creek–4	Lower Three Runs–3
Pesticides					
Notes: 1. Samples were analyzed annually for the constituents listed below. All analyses were performed by Shealy Environmental Services, Inc., and were below the detection limits. The results shown are the detection limits for each sample in µg/kg. *2.Detection limits may change because of differences in percent solids in individual samples.* *3.Samples were not collected in 1996 from PAR Pond Pumphouse, Upper Three Runs–Road F, River–2, and River–10. (Collections were made at these locations in 1995.)*					
Aldrin	<167	<33.3	<167	<167	<167
Alpha–BHC	<167	<33.3	<167	<167	<167
Beta–BHC	<167	<33.3	<167	<167	<167
Delta–BHC	<167	<33.3	<167	<167	<167
Lindane	<167	<33.3	<167	<167	<167
Chlordane	<1667	<333	<1667	<1667	<1667
4,4'–DDD	<167	<33.3	<167	<167	<167
4,4'–DDE	<167	<33.3	<167	<167	<167
4,4'–DDT	<167	<33.3	<167	<167	<167
Dieldrin	<167	<33.3	<167	<167	<167
Endosulfan I	<167	<33.3	<167	<167	<167
Endosulfan II	<167	<33.3	<167	<167	<167
Endosulfan sulfate	<167	<33.3	<167	<167	<167
Endrin	<167	<33.3	<167	<167	<167
Endrin aldehyde	<167	<33.3	<167	<167	<167
Endrin ketone	<167	<33.3	<167	<167	<167
Heptachlor	<167	<33.3	<167	<167	<167
Heptachlor epoxide	<167	<33.3	<167	<167	<167
Methoxychlor	<667	<133	<667	<667	<667
Toxaphene	<8333	<1667	<8333	<8333	<8333
Herbicides					
2,4–D	<33.3	<33.3	<33.3	<33.3	<33.3
Silvex (2,4,5–TP)	<33.3	<33.3	<33.3	<33.3	<33.3

Table 69
Sediment Surveillance — Inorganic Contaminants

	mg/L					
Inorganic Constituent	Upper Three Runs at Road 1A (U3R–1A) Control	River 10 (River-Mile 120)	River 2 (River Mile 160) Control	Upper Three Runs (U3R–1)[a]	Beaver Dam Creek 400 Area (400–D)	Tinker Creek at Kennedy Pond Road Control
Cyanide	<1	[b]	[b]	[b]	<1	<1
Aluminum	0.74	1.88	0.41	0.562	1.83	2.78
Arsenic	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Barium	0.117	0.472	1.07	0.168	1.23	0.316
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium	1.28	11.3	8.36	5.12	14.8	38
Chromium	<0.01	<0.01	0.021	<0.01	0.029	<0.01
Copper	<0.01	<0.01	0.044	0.013	0.015	<0.01
Iron	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Lead	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Magnesium	0.448	2.89	2.01	0.85	4.01	2.66
Manganese	0.062	0.399	0.511	0.222	1.75	2.53
Mercury	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Nickel	<0.01	<0.01	<0.01	<0.01	0.034	<0.01
Selenium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Silver	<0.01	<0.005	<0.005	<0.005	<0.01	<0.01
Uranium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Zinc	0.067	0.07	0.274	0.022	0.33	<0.005

a The stream location Upper Three Runs–1 inadvertently was sampled in place of the river location Vogtle Discharge in 1996.
b Cyanide analyses inadvertently were not performed at this location.

Table 69
Sediment Surveillance — Inorganic Contaminants

	mg/L				
Inorganic Constituent	Lower Three Runs at Patterson Mill (L3R–2)	Upper Three Runs Road A (U3R–4)	Steel Creek Road A (SC–4)	Pen Branch Road A (PB–3)	Four Mile Creek Road A (4M–6)
Cyanide	<1	<1	<1	<1	<1
Aluminum	0.75	2.5	0.354	2.78	0.476
Arsenic	<0.02	<0.05	<<0.05	<0.05	<0.05
Barium	0.38	0.25	0.68	0.444	0.343
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium	92	11	92.2	14.3	7.93
Chromium	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	<0.01	<0.005	<0.005	<0.005	<0.005
Iron	<0.02	<0.02	<0.02	1.4	<0.02
Lead	<0.02	0.027	<0.02	<0.02	<0.02
Magnesium	3.46	2.15	2.31	1.63	0.475
Manganese	1.26	0.701	10.9	6.95	6.75
Mercury	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Nickel	<0.01	0.019	<0.01	0.015	0.02
Selenium	<0.02	<0.05	<0.05	<0.05	<0.05
Silver	<0.01	<0.005	<0.005	<0.005	1.79
Uranium	<0.5	<0.5	<0.5	<0.5	<0.5
Zinc	0.086	0.059	0.118	0.143	0.164

Table 70
Fish Surveillance — Mercury

Location	Species	Mercury (μg Hg/g – Parts Per Million)						
		Analytical Results					Max	Min
Note: ND denotes "not detected; the reporting limit is less than 0.33 μg/g."								
Augusta Lock and Dam	Bass	0.63	0.50	1.03	ND	0.90	1.03	ND
Augusta Lock and Dam	Panfish	0.33	0.93	0.43	ND	ND	0.93	ND
Augusta Lock and Dam	Catfish	0.57	ND	ND	ND	ND	0.57	ND
Upper Three Runs Creek River Mouth	Bass	0.50	0.40	1.00	ND	1.00	1.00	ND
Upper Three Runs Creek River Mouth	Panfish	ND	ND	ND	ND	0.43	0.43	ND
Upper Three Runs Creek River Mouth	Catfish	0.37	ND	ND	ND	ND	0.37	ND
Beaver Dam Creek River Mouth	Bass	0.53	1.13	0.47	0.43	0.47	1.13	0.43
Beaver Dam Creek River Mouth	Panfish	ND	ND	0.40	0.57	ND	0.57	ND
Beaver Dam Creek River Mouth	Catfish	ND	0.43	0.37	ND	ND	0.43	ND
Four Mile Creek River Mouth	Bass	0.83	0.70	0.77	0.73	0.60	0.83	0.60
Four Mile Creek River Mouth	Panfish	ND	0.53	ND	ND	ND	0.53	ND
Four Mile Creek River Mouth	Catfish	0.43	0.33	0.43	0.40	ND	0.43	ND
Steel Creek River Mouth	Bass	1.13	0.57	0.53	0.60	0.60	1.13	0.50
Steel Creek River Mouth	Panfish	ND	ND	ND	ND	ND	ND	ND
Steel Creek River Mouth	Catfish	0.40	0.33	ND	ND	ND	0.40	ND
Lower Three Runs Creek River Mouth	Bass	0.93	0.87	0.60	0.83	0.63	0.93	0.60
Lower Three Runs Creek River Mouth	Panfish	0.40	0.47	ND	ND	ND	0.47	ND
Lower Three Runs Creek River Mouth	Catfish	0.50	ND	0.40	ND	0.53	0.53	ND
Hwy 301	Bass	0.63	0.73	0.50	0.53	0.63	0.73	0.50
Hwy 301	Panfish	ND	ND	ND	0.33	0.37	0.37	ND
Hwy 301	Catfish	ND	0.43	0.40	0.43	0.37	0.43	ND

Table 70
Fish Surveillance — Mercury

Location	Species	Mercury (μg Hg/g – Parts Per Million)						
		Analytical Results					Max	Min
Stokes Bluff	Bass	1.03	1.67	1.20	1.33	1.60	1.67	1.03
Stokes Bluff	Panfish	0.50	0.47	0.73	0.60	0.40	0.73	0.40
Stokes Bluff	Catfish	0.33	0.40	0.33	0.37	0.37	0.40	0.33
Savannah Hwy 17A Fresh Water	Bass	1.13	0.87	0.67	1.00	0.77	1.13	0.67
Savannah Hwy 17A Fresh Water	Panfish	0.47	0.43	0.43	0.40	0.43	0.47	0.40
Savannah Hwy 17A Fresh Water	Catfish	0.40	0.50	ND	0.67	0.67	0.67	ND
Savannah Salt Water	Red Drum	0.37	0.37	0.33	0.33	0.33	0.37	0.33
Savannah Salt Water	Mullet	ND	ND	ND	ND	ND	ND	ND
Savannah Salt Water	Catfish	0.87	ND	ND	0.47	0.40	0.87	ND
L-Lake	Bass	1.00	0.73	1.00	1.43	0.77	1.43	0.73
L-Lake	Panfish	ND	ND	ND	0.70	ND	0.70	ND
PAR Pond	Bass	1.70	1.23	1.30	1.07	1.17	1.70	1.07
PAR Pond	Panfish	0.53	ND	0.47	0.43	0.57	0.57	ND
PAR Pond	Catfish	ND	0.33				0.33	ND
Pond B	Bass	0.80	0.90	0.63	1.70	0.63	1.70	0.63
Pond B	Panfish	ND	ND	ND	ND	ND	ND	ND
Steel Creek 4	Bass	1.10	1.20	1.17	1.30	1.13	1.30	1.10
Steel Creek 4	Panfish	ND	0.33	0.43	0.40	0.47	0.47	ND
Steel Creek 4	Catfish	1.43					1.43	1.43

Table 71
Blind Sample Results for pH Field Measurements

	pH Units		
Sample Identification	Measured Value	Actual Value	Difference
BpH–01–1	6.80	6.76	0.04 units
BpH–01–2	9.00	9.03	0.03 units
BpH–01–3	7.30	7.37	0.07 units
BpH–02–1	9.20	9.05	0.15 units
BpH–02–2	7.30	7.45	0.15 units
BpH–02–3	4.00	4.09	0.09 units
BpH–02–4	6.70	6.89	0.19 units
BpH–03–1	6.80	6.83	0.03 units
BpH–03–2	4.00	4.10	0.10 units
BpH–03–3	7.30	7.48	0.18 units
BpH–04–1	9.06	9.15	0.09 units
BpH–04–2	4.00	4.08	0.08 units
BpH–04–3	7.41	7.44	0.03 units
BpH–05–1	9.85	9.91	0.06 units
BpH–05–2	3.90	3.98	0.08 units
BpH–05–3	6.71	6.83	0.12 units
BpH–06–1	8.93	9.10	0.17 units
BpH–06–2	3.98	4.03	0.05 units
BpH–06–3	6.80	6.86	0.06 units
BpH–07–1	6.40	6.58	0.18 units
BpH–07–2	8.50	8.43	0.07 units
BpH–07–3	5.90	6.01	0.11 units
BpH–08–1	8.71	8.74	0.03 units
BpH–08–2	3.97	4.04	0.07 units
BpH–08–3	6.99	6.88	0.11 units
BpH–09–1	3.96	4.04	0.08 units
BpH–09–2	6.90	6.87	0.03 units
BpH–10–1	8.80	9.14	0.34 units
BpH–10–2	4.00	4.06	0.06 units
BpH–11–1	6.80	6.89	0.09 units
BpH–11–3	6.80	6.90	0.10 units
BpH–12–1	6.88	6.88	0.00 units
BpH–12–2	8.85	9.19	0.34 units

Table 72
Blind Sample Results for Conductivity Field Measurements

	(μmhos/cm)		
Sample Identification	Measured Value	Actual Value	Difference
BC–01–1	93	90	3.33%
BC–01–2	91	85	7.05 %
BC–01–3	113	112	0.89 %
BC–02–1	89	99	10.10%
BC–02–2	127	133	4.51%
BC–02–3	112	118	5.08 %
BC–02–4	101	100	1.00 %
BC–03–1	80	79	1.28 %
BC–03–2	105	105	0.00 %
BC–03–3	200	204	1.96 %
BC–04–1	72	74	2.70 %
BC–04–2	100	99	1.01 %
BC–04–3	148	149	0.87 %
BC–05–1	189	198	4.54 %
BC–05–2	97	97	0.00 %
BC–05–3	186	188	1.06 %
BC–06–1	112	114	1.75 %
BC–06–2	194	199	2.51 %
BC–06–3	99	102	2.94 %
BC–07–1	107	108	0.93 %
BC–07–2	178	175	1.71 %
BC–07–3	102	98	4.08 %
BC–08–1	146	145	0.68 %
BC–08–2	61	59	3.38 %
BC–08–3	89	88	1.14 %

Table 73.
EMS Blind Sample Results for Tritium

	pCi/mL			Range	
Sample Date	Measured Value	Known Value	Ratio	Lower Control Limit[a]	Upper Control Limit[a]
01–26–96	2.97 ± 0.41	2.9 ± 0.6	1.02	2.	5.6
02–06–96	5.1 ± 0.2	5.0 ± 0.6	1.02	3.5	9.6
02–06–96	5.1 ± 0.8	5.0 ± 0.6	1.02	3.5	9.6
02–13–96	5.8 ± 0.4	6.4 ± 0.6	0.90	4.4	12.2
03–14–96	3.4 ± 0.4	3.3 ± 0.6	1.03	2.3	6.3
04–15–96	1.6 ± 0.8	1.6 ± 0.6	1.00	1.1	3.
05–13–96	–0.01 ± 0.36	0.62 ± 0.6		0.4	1.2
06–12–96	7.17 ± 0.47	7.6 ± 0.6	0.94	5.3	14.6
07–12–96	10.2 ± 0.5	10.0 ± 0.6	1.02	6.9	19.
08–13–96	11.3 ± 0.5	11.3 ± 0.6	1.00	7.8	21.6
09–16–96	2.64 ± 0.39	3.4 ± 0.6	0.78	2.4	6.6
10–22–96	7.44 ± 0.48	7.9 ± 0.6	0.94	5.5	15.1
11–18–96	5.45 ± 0.44	5.6 ± 0.6	0.97	3.9	10.7

a Tritium control limits are according to DOE/Environmental Measurements Laboratory limits. (Measured/Known Ratio: LCL 0.69 and UCL 1.91)

Table 74
EMS Blind Sample Results for Gamma-Emitting Radionuclides

Sample Number	Nuclide	pCi/L		Ratio Found/Actual	Range	
		Found Value	Actual Value		Lower Control Limit[a]	Upper Control Limit[a]
162(counted on 7/26/96)	Co–60	98 ± 4	98 ± 5	1.00	89	106
	Zn–65	278 ± 13	266 ± 30	1.05	214	318
	Cs–134	70 ± 3	76 ± 5	0.92	67	85
	Cs–137	197 ± 8	196 ± 10	1.01	179	213
	Ba–133	751 ± 14	739 ± 75	1.02	608	870
162(counted on 7/31/96)	Co–60	97 ± 4	98 ± 5	0.99	89	106
	Zn–65	286 ± 13	266 ± 30	1.08	214	318
	Cs–134	69 ± 3	76 ± 5	0.91	67	85
	Cs–137	206 ± 8	196 ± 10	1.05	179	213
	Ba–133	662 ± 14	739 ± 75	0.90	608	870

a Gamma control limits are according to EPA's Quality Assurance Division (QAD) limits.

Table 75
NPDES Duplicate Sample Results

Sample	Analyte	Units	Result 1	Result 2	Difference
Note:	*Result 1 and Result 2 were duplicate samples analyzed by the same laboratory, Shealy Environmental Services.*				
A–001A	1,1,1–Trichloroethane	ug/L	<2.0	<2.0	0
A–003	1,1,1–Trichloroethane	ug/L	<2	<2	0
A–001	1,1,1–Trichloroethane	ug/L	<2	<2	0
M–005	1,1,1–Trichloroethane	ug/L	<2	<2	0
A–001	1,1,1–Trichloroethane	ug/L	<2	<2	0
A–001A	1,1,1–Trichloroethane	ug/L	<2	<2	0
A–003	1,1,1–Trichloroethane	ug/L	<2.0	<2.0	0
M–005	1,1,1–Trichloroethane	ug/L	<2.0	<2.0	0
A–001A	1,1,1–Trichloroethane	ug/L	<2.0	<2.0	0
A–003	1,1,1–Trichloroethane	ug/L	<2.0	<2.0	0
M–005	1,1,1–Trichloroethane	ug/L	<2.0	<2.0	0
A–003	1,1,1–Trichloroethane	ug/L	<2.0	<2.0	0
A–001	1,1,1–Trichloroethane	ug/L	<2.0	<2.0	0
M–005	1,1,1–Trichloroethane	ug/L	<2.0	<2.0	0
A–003	1,1,1–Trichloroethane	ug/L	<2.0	<2.0	0
X–8C	1,1,1–Trichloroethane	ug/L	<2.0	<2.0	0
A–01	1,1,1–Trichloroethane	ug/L	<2.0	<2.0	0
H–017	Aluminum	mg/L	<0.05	<0.05	0
F–012	Aluminum	mg/L	<0.05	<0.05	0
K–018	Aluminum	mg/L	1.62	1.35	0.27
M–004	Aluminum	mg/L	<0.05	<0.05	0
F–013	Aluminum	mg/L	<0.05	<0.05	0
F–012	Aluminum	mg/L	<0.05	<0.05	0
F–008	Aluminum	mg/L	<0.05	<0.05	0
F–008	Aluminum	mg/L	0.252	0.256	0.004
H–012	Aluminum	mg/L	0.089	0.083	0.006
K–018	Aluminum	mg/L	0.189	0.171	0.018
F–012	Aluminum	mg/L	0.194	0.121	0.073
M–004	Aluminum	mg/L	0.396	0.414	0.018
F–013	Aluminum	mg/L	0.34	0.311	0.029
F–012	Aluminum	mg/L	0.117	0.136	0.019
K–018	Aluminum	mg/L	0.133	0.14	0.007
F–012	Aluminum	mg/L	0.117	0.136	0.019

Table 75
NPDES Duplicate Sample Results

Sample	Analyte	Units	Result 1	Result 2	Difference
F–013	Aluminum	mg/L	0.34	0.311	0.029
M–04	Aluminum	mg/L	0.175	0.272	0.097
H–017	Ammonia	mg/L	<0.1	<0.1	0
F–012	Ammonia	mg/L	<0.1	<0.1	0
H–017	Ammonia	mg/L	0.141	0.15	0.009
F–012	Ammonia	mg/L	0.11	0.107	0.003
F–013	Ammonia	mg/L	0.102	<0.1	<0.102
F–012	Ammonia	mg/L	0.179	0.397	0.218
H–017	Ammonia	mg/L	0.11	<0.1	<0.11
F–012	Ammonia	mg/L	<0.1	<0.1	0
H–017	Ammonia	mg/L	<0.1	<0.1	0
F–008	Ammonia	mg/L	<0.1	0.106	<0.106
H–017	Ammonia	mg/L	<0.1	<0.1	0
F–013	Ammonia	mg/L	0.18	<0.1	<0.18
F–012	Ammonia	mg/L	<0.1	<0.1	0
F–008	Ammonia	mg/L	<0.1	<0.1	0
H–012	Ammonia	mg/L	<0.1	<0.1	0
H–017	Ammonia	mg/L	<0.1	<0.1	0
F–012	Ammonia	mg/L	<0.01	<0.1	0
H–017	Ammonia	mg/L	<0.1	<0.1	0
F–013	Ammonia	mg/L	0.128	<0.1	<0.128
F–012	Ammonia	mg/L	0.533	<0.1	<0.533
F–013	Ammonia	mg/L	0.117	<0.1	<0.117
F–012	Ammonia	mg/L	<0.1	<0.1	0
F–012	Ammonia	mg/L	<0.1	<0.1	0
F–013	Ammonia	mg/L	0.117	<0.1	<0.117
H–017	Ammonia	mg/L	0.104	0.102	0.002
M–04	Ammonia	mg/L	0.689	<0.1	<0.689
SC–004	Arsenic	mg/L	<0.02	<0.02	0
SC–004	Arsenic	mg/L	<0.02	<0.02	0
SC–004	Arsenic	mg/L	<0.02	<0.02	0
SC–004	Barium	mg/L	<0.01	0.013	<0.13
SC–004	Barium	mg/L	0.015	0.014	0.001
SC–004	Barium	mg/L	0.03	0.015	0.015
X–014	Benzene	ug/L	<0.5	<0.5	0
X–014	Benzene	ug/L	<0.5	<0.5	0

Table 75
NPDES Duplicate Sample Results

Sample	Analyte	Units	Result 1	Result 2	Difference
X–014	Benzene	ug/L	<0.5	<0.5	0
X–014	Benzene	ug/L	<0.5	<0.5	0
X–8B	Benzene	ug/L	<0.5	<0.5	0
F–003	Biological Oxygen Demand	mg/L	<1.0	<1.0	0
A–011	Biological Oxygen Demand	mg/L	<1.0	1.1	<1.1
X–014	Biological Oxygen Demand	mg/L	<1.0	1.1	<1.1
F–003	Biological Oxygen Demand	mg/L	<1.0	<1.0	0
DW–004	Biological Oxygen Demand	mg/L	1.8	3.6	1.8
K–018	Biological Oxygen Demand	mg/L	1.2	<1.0	<1.2
A–011	Biological Oxygen Demand	mg/L	<1.0	<1.0	0
A–011	Biological Oxygen Demand	mg/L	<1.0	<1.0	0
A–001	Biological Oxygen Demand	mg/L	16	37	21
A–005	Biological Oxygen Demand	mg/L	2.2	<1.0	<2.2
F–003	Biological Oxygen Demand	mg/L	1.7	<1.0	<1.7
DW–004	Biological Oxygen Demand	mg/L	3.1	2.9	0.2
A–011	Biological Oxygen Demand	mg/L	<1.0	<1.0	0
A–001	Biological Oxygen Demand	mg/L	<1.0	1.1	<1.1
X–014	Biological Oxygen Demand	mg/L	<1.0	<1.0	0
A–001	Biological Oxygen Demand	mg/L	<1.0	1.6	<1.6
A–011	Biological Oxygen Demand	mg/L	2.2	<1.0	<2.2
A–005	Biological Oxygen Demand	mg/L	3.3	3.5	0.2
F–003	Biological Oxygen Demand	mg/L	<1.0	<1.0	0
A–011	Biological Oxygen Demand	mg/L	4.6	5.5	0.9
A–001	Biological Oxygen Demand	mg/L	4.1	4.2	0.1
K–018	Biological Oxygen Demand	mg/L	1.8	1.7	0.1
DW–004	Biological Oxygen Demand	mg/L	<1.0	1.3	<1.3
X–014	Biological Oxygen Demand	mg/L	<1.0	<1.0	0
F–003	Biological Oxygen Demand	mg/L	<1.0	1	<1
A–011	Biological Oxygen Demand	mg/L	<1.0	1	<1
A–005	Biological Oxygen Demand	mg/L	<1.0	<1.0	0
K–018	Biological Oxygen Demand	mg/L	9.1	2.4	6.7
A–011	Biological Oxygen Demand	mg/L	<1.0	<1.0	0
DW–004	Biological Oxygen Demand	mg/L	4	3	1
A–001	Biological Oxygen Demand	mg/L	<1.0	<1.0	0
X–014	Biological Oxygen Demand	mg/L	1.7	1.4	0.3
X–8B	Biological Oxygen Demand	mg/L	<2.0	<2.0	0

Table 75
NPDES Duplicate Sample Results

Sample	Analyte	Units	Result 1	Result 2	Difference
H–16	Biological Oxygen Demand	mg/L	<2.0	<2.0	0
SC–004	Cadmium	mg/L	<0.005	<0.005	0
SC–004	Cadmium	mg/L	<0.005	<0.005	0
SC–004	Cadmium	mg/L	<0.005	<0.005	0
H–16	Cadmium	mg/L	<0.005	<0.005	0
H–017	Chromium	mg/L	<0.01	<0.01	0
F–012	Chromium	mg/L	<0.01	<0.01	0
F–013	Chromium	mg/L	<0.01	<0.01	0
F–012	Chromium	mg/L	<0.01	<0.01	0
SC–004	Chromium	mg/L	<0.01	<0.01	0
F–008	Chromium	mg/L	<0.01	<0.01	0
F–008	Chromium	mg/L	<0.01	<0.01	0
H–012	Chromium	mg/L	<0.01	<0.01	0
SC–004	Chromium	mg/L	<0.01	<0.01	0
F–012	Chromium	mg/L	<0.01	<0.01	0
F–013	Chromium	mg/L	<0.01	<0.01	0
F–012	Chromium	mg/L	<0.01	<0.01	0
F–012	Chromium	mg/L	<0.01	<0.01	0
F–013	Chromium	mg/L	<0.01	<0.01	0
SC–004	Chromium	mg/L	<0.01	<0.01	0
M–04	Chromium	mg/L	<0.01	<0.01	0
H–16	Chromium	mg/L	<0.01	<0.01	0
H–017	Copper	mg/L	0.02	0.019	0.001
F–012	Copper	mg/L	0.012	0.01	0.002
M–004	Copper	mg/L	<0.01	<0.01	0
F–013	Copper	mg/L	0.019	0.019	0
F–012	Copper	mg/L	0.01	0.009	0.001
F–008	Copper	mg/L	0.012	<0.01	<0.012
F–008	Copper	mg/L	<0.01	<0.01	0
H–012	Copper	mg/L	0.019	0.017	0.002
F–012	Copper	mg/L	<0.01	<0.01	0
M–004	Copper	mg/L	0.033	0.03	0.003
F–013	Copper	mg/L	0.013	0.008	0.005
F–012	Copper	mg/L	0.012	0.011	0.001
F–012	Copper	mg/L	0.012	0.011	0.001
F–013	Copper	mg/L	0.013	0.008	0.005

Table 75
NPDES Duplicate Sample Results

Sample	Analyte	Units	Result 1	Result 2	Difference
A–01	Copper	mg/L	0.308	0.509	0.201
H–16	Copper	mg/L	<0.005	<0.005	0
H–017	Lead	mg/L	<0.02	<0.02	0
F–012	Lead	mg/L	<0.02	<0.02	0
M–004	Lead	mg/L	<0.02	<0.02	0
F–013	Lead	mg/L	<0.02	<0.02	0
F–012	Lead	mg/L	<0.02	<0.02	0
SC–004	Lead	mg/L	<0.02	<0.02	0
F–008	Lead	mg/L	<0.02	<0.02	0
F–008	Lead	mg/L	<0.02	<0.02	0
H–012	Lead	mg/L	<0.02	<0.02	0
SC–004	Lead	mg/L	<0.02	<0.02	0
F–012	Lead	mg/L	<0.02	<0.02	0
M–004	Lead	mg/L	<0.06	<0.06	0
F–013	Lead	mg/L	<0.003	<0.003	0
F–012	Lead	mg/L	<0.003	<0.003	0
F–012	Lead	mg/L	<0.003	<0.003	0
F–013	Lead	mg/L	<0.003	<0.003	0
SC–004	Lead	mg/L	<0.003	<0.003	0
M–04	Lead	mg/L	<0.003	<0.003	0
A–01	Lead	mg/L	<0.003	<0.003	0
H–08	Lead	mg/L	0.008	0.021	0.013
H–16	Lead	mg/L	<0.003	<0.003	0
H–017	Manganese	mg/L	<0.01	<0.01	0
F–012	Manganese	mg/L	<0.01	<0.01	0
F–013	Manganese	mg/L	<0.01	<0.01	0
F–012	Manganese	mg/L	<0.01	<0.01	0
F–008	Manganese	mg/L	<0.01	<0.01	0
F–008	Manganese	mg/L	0.009	0.009	0
H–012	Manganese	mg/L	0.012	0.013	0.001
F–012	Manganese	mg/L	0.023	0.018	0.005
F–013	Manganese	mg/L	0.048	0.05	0.002
F–012	Manganese	mg/L	0.027	0.027	0
F–012	Manganese	mg/L	0.027	0.027	0
F–013	Manganese	mg/L	0.048	0.05	0.002
H–017	Mercury	mg/L	<0.0001	<0.0001	0

Table 75
NPDES Duplicate Sample Results

Sample	Analyte	Units	Result 1	Result 2	Difference
F–012	Mercury	mg/L	<0.0001	<0.0001	0
F–013	Mercury	mg/L	<0.0001	<0.0001	0
F–012	Mercury	mg/L	<0.0001	<0.0001	0
SC–004	Mercury	mg/L	0.0003	0.0002	0.0001
F–008	Mercury	mg/L	0.0001	<0.0001	<0.0001
F–008	Mercury	mg/L	<0.0001	<0.0001	0
H–012	Mercury	mg/L	<0.0001	<0.0001	0
SC–004	Mercury	mg/L	<0.0001	<0.0001	0
F–012	Mercury	mg/L	<0.0001	<0.0001	0
F–012	Mercury	mg/L	<0.0001	<0.0001	0
F–013	Mercury	mg/L	<0.0001	<0.0001	0
F–012	Mercury	mg/L	<0.0001	<0.0001	0
F–013	Mercury	mg/L	<0.0001	<0.0001	0
SC–004	Mercury	mg/L	<0.0001	<0.0001	0
A–01	Mercury	mg/L	<0.0001	<0.0001	0
X–8B	Mercury	mg/L	<0.0001	<0.0001	0
H–16	Mercury	mg/L	<0.0001	<0.0001	0
H–017	Nickel	mg/L	<0.01	<0.01	0
F–012	Nickel	mg/L	<0.01	<0.01	0
M–004	Nickel	mg/L	<0.01	0.011	<0.011
F–013	Nickel	mg/L	<0.01	<0.01	0
F–012	Nickel	mg/L	<0.01	<0.01	0
F–008	Nickel	mg/L	<0.01	<0.01	0
F–008	Nickel	mg/L	<0.01	<0.01	0
H–012	Nickel	mg/L	<0.01	<0.01	0
F–012	Nickel	mg/L	<0.01	<0.01	0
M–004	Nickel	mg/L	<0.03	<0.03	0
F–012	Nickel	mg/L	<0.01	<0.01	0
F–013	Nickel	mg/L	<0.01	<0.01	0
F–012	Nickel	mg/L	<0.01	<0.01	0
F–013	Nickel	mg/L	<0.01	<0.01	0
M–04	Nickel	mg/L	<0.01	<0.01	0
H–16	Nickel	mg/L	<0.01	<0.01	0
H–017	Nitrate	mg/L	<0.02	<0.02	0
F–012	Nitrate	mg/L	<0.02	<0.02	0
H–017	Nitrate	mg/L	0.139	0.086	0.053

Table 75
NPDES Duplicate Sample Results

Sample	Analyte	Units	Result 1	Result 2	Difference
F–012	Nitrate	mg/L	0.042	0.026	0.016
F–013	Nitrate	mg/L	0.027	0.039	0.012
F–012	Nitrate	mg/L	0.038	0.02	0.018
H–017	Nitrate	mg/L	0.023	0.022	0.001
F–012	Nitrate	mg/L	<0.02	<0.02	0
SC–004	Nitrate	mg/L	<0.02	<0.02	0
H–017	Nitrate	mg/L	<0.02	<0.02	0
F–008	Nitrate	mg/L	<0.02	<0.02	0
H–017	Nitrate	mg/L	<0.02	<0.02	0
F–013	Nitrate	mg/L	<0.02	<0.02	0
F–012	Nitrate	mg/L	<0.02	<0.02	0
F–008	Nitrate	mg/L	<0.02	<0.02	0
H–012	Nitrate	mg/L	0.031	0.021	0.01
SC–004	Nitrate	mg/L	0.045	0.046	0.001
H–017	Nitrate	mg/L	0.048	0.039	0.009
F–012	Nitrate	mg/L	<0.02	0.021	<0.021
H–017	Nitrate	mg/L	<0.02	<0.02	0
F–013	Nitrate	mg/L	<0.02	<0.02	0
F–012	Nitrate	mg/L	<0.02	0.028	<0.028
F–013	Nitrate	mg/L	0.025	0.032	0.007
F–012	Nitrate	mg/L	<0.02	0.022	<0.022
F–012	Nitrate	mg/L	<0.02	0.022	<0.022
F–013	Nitrate	mg/L	0.025	0.032	0.007
H–017	Nitrate	mg/L	0.035	0.042	0.007
SC–004	Nitrate	mg/L	0.06	0.052	0.008
C–001	Oil & Grease	mg/L	<1.0	<1.0	0
C–003	Oil & Grease	mg/L	<1.0	<1.0	0
P–019	Oil & Grease	mg/L	<1.0	1.1	<1.1
P–013	Oil & Grease	mg/L	<1.0	<1.0	0
H–008	Oil & Grease	mg/L	<1.0	1.8	<1.8
H–004	Oil & Grease	mg/L	2.4	2.6	0.2
K–010	Oil & Grease	mg/L	<1.0	<1.0	0
F–002	Oil & Grease	mg/L	1.1	1.4	0.3
K–018	Oil & Grease	mg/L	1.9	4.2	2.3
P–019	Oil & Grease	mg/L	2.5	<1.0	<2.5
P–013	Oil & Grease	mg/L	2.6	<1.0	<2.6

Table 75
NPDES Duplicate Sample Results

Sample	Analyte	Units	Result 1	Result 2	Difference
C–001	Oil & Grease	mg/L	1.3	<1.0	<1.3
C–003	Oil & Grease	mg/L	1.9	2.1	0.2
A–011	Oil & Grease	mg/L	1.1	<1.0	<1.1
C–001	Oil & Grease	mg/L	2.8	<1.0	<2.8
C–003	Oil & Grease	mg/L	2.4	1.2	1.2
P–019	Oil & Grease	mg/L	<1.0	<1.0	0
P–013	Oil & Grease	mg/L	<1.0	<1.0	0
H–004	Oil & Grease	mg/L	<1.0	<1.0	0
H–008	Oil & Grease	mg/L	<1	3.9	<3.9
F–005	Oil & Grease	mg/L	<1.0	<1.0	0
C–001	Oil & Grease	mg/L	<1.0	<1.0	0
C–003	Oil & Grease	mg/L	<1.0	<1.0	0
A–011	Oil & Grease	mg/L	2.4	3.5	1.1
A–001	Oil & Grease	mg/L	<1.0	2	<2
A–003	Oil & Grease	mg/L	1.9	2.4	0.5
L–007	Oil & Grease	mg/L	<1.0	1	<1
L–008	Oil & Grease	mg/L	2.4	1.3	1.1
P–019	Oil & Grease	mg/L	<1.0	<1.0	0
P–013	Oil & Grease	mg/L	<1.0	<1.0	0
K–006	Oil & Grease	mg/L	<1.0	<1.0	0
C–003	Oil & Grease	mg/L	<1.0	<1.0	0
P–019	Oil & Grease	mg/L	<1.0	<1.0	0
P–013	Oil & Grease	mg/L	1.1	<1.0	<1.1
F–005	Oil & Grease	mg/L	<1.0	4.5	<4.5
H–004	Oil & Grease	mg/L	1.8	2	0.2
H–008	Oil & Grease	mg/L	<1.0	<1.0	0
C–001	Oil & Grease	mg/L	<1.0	3	<3
A–011	Oil & Grease	mg/L	<1.0	1	<1
A–001	Oil & Grease	mg/L	<1.0	<1.0	0
K–018	Oil & Grease	mg/L	<1.0	<1.0	0
K–006	Oil & Grease	mg/L	3	<1.0	<3
P–019	Oil & Grease	mg/L	1.4	<1.0	<1.4
L–008	Oil & Grease	mg/L	3.6	1.9	1.7
L–007	Oil & Grease	mg/L	1.7	3.7	2
C–001	Oil & Grease	mg/L	<1.0	1.7	<1.7
C–003	Oil & Grease	mg/L	<1.0	2.7	<2.7

Table 75
NPDES Duplicate Sample Results

Sample	Analyte	Units	Result 1	Result 2	Difference
P–013	Oil & Grease	mg/L	<1.0	<1.0	0
P–013	Oil & Grease	mg/L	<1.0	<1.0	0
H–004	Oil & Grease	mg/L	<1.0	<1.0	0
H–008	Oil & Grease	mg/L	<1.0	1.9	<1.9
F–005	Oil & Grease	mg/L	<1.0	<1.0	0
C–001	Oil & Grease	mg/L	<1.0	<1.0	0
C–003	Oil & Grease	mg/L	<1.0	<1.0	0
P–013	Oil & Grease	mg/L	58	<1	<58
K–018	Oil & Grease	mg/L	<1.0	<1.0	0
L–008	Oil & Grease	mg/L	<1.0	<1.0	0
A–011	Oil & Grease	mg/L	<1.0	<1.0	0
A–001	Oil & Grease	mg/L	<1.0	<1.0	0
C–001	Oil & Grease	mg/L	<1.0	<1.0	0
C–003	Oil & Grease	mg/L	1.6	1.4	0.2
P–013	Oil & Grease	mg/L	<1.0	<1.0	0
F–05	Oil & Grease	mg/L	4.3	6.4	2.1
H–02	Oil & Grease	mg/L	1.9	2.5	0.6
H–16	Oil & Grease	mg/L	<1.0	<1.0	0
F–005	Oil & Grease	mg/L	1.5	1.7	0.2
X–014	Phenol	mg/L	<0.006	<0.006	0
X–014	Phenol	mg/L	<0.006	0.009	<0.009
X–014	Phenol	mg/L	<0.006	<0.006	0
X–014	Phenol	mg/L	<0.006	0.051	<0.051
X–8B	Phenol	mg/L	<0.006	<0.006	0
SC–004	Phosphorous	mg/L	<0.01	<0.01	0
SC–004	Phosphorous	mg/L	<0.01	0.016	<0.016
SC–004	Phosphorous	mg/L	0.017	0.656	0.639
SC–004	Selenium	mg/L	<0.02	<0.02	0
SC–004	Selenium	mg/L	<0.02	<0.02	0
SC–004	Selenium	mg/L	<0.02	<0.02	0
H–017	Silver	mg/L	<0.005	<0.005	0
F–012	Silver	mg/L	<0.005	<0.005	0
F–013	Silver	mg/L	<0.005	<0.005	0
F–012	Silver	mg/L	<0.005	<0.005	0
SC–004	Silver	mg/L	<0.005	<0.005	0
F–008	Silver	mg/L	<0.005	<0.005	0

Table 75
NPDES Duplicate Sample Results

Sample	Analyte	Units	Result 1	Result 2	Difference
F–008	Silver	mg/L	<0.005	<0.005	0
H–012	Silver	mg/L	<0.005	<0.005	0
SC–004	Silver	mg/L	<0.005	<0.005	0
F–012	Silver	mg/L	<0.005	<0.005	0
F–012	Silver	mg/L	<0.005	<0.005	0
F–013	Silver	mg/L	<0.005	<0.005	0
F–012	Silver	mg/L	<0.01	<0.01	0
F–013	Silver	mg/L	<0.005	<0.005	0
SC–004	Silver	mg/L	<0.005	<0.005	0
H–16	Silver	mg/L	<0.005	<0.005	0
A–001A	Tetrachloroethylene	ug/L	<2.0	<2.0	0
A–003	Tetrachloroethylene	ug/L	<2	<2	0
A–001	Tetrachloroethylene	ug/L	<2	<2	0
M–005	Tetrachloroethylene	ug/L	<2	<2	0
A–001	Tetrachloroethylene	ug/L	<2	<2	0
A–001A	Tetrachloroethylene	ug/L	<2.0	<2	0
A–003	Tetrachloroethylene	ug/L	<2.0	<2.0	0
M–005	Tetrachloroethylene	ug/L	<2.0	<2.0	0
A–001A	Tetrachloroethylene	ug/L	<2.0	<2.0	0
A–003	Tetrachloroethylene	ug/L	<2.0	<2.0	0
M–005	Tetrachloroethylene	ug/L	<2.0	<2.0	0
A–003	Tetrachloroethylene	ug/L	<2.0	<2.0	0
A–001	Tetrachloroethylene	ug/L	<2.0	<2.0	0
M–005	Tetrachloroethylene	ug/L	<2.0	<2.0	0
A–003	Tetrachloroethylene	ug/L	<2.0	<2.0	0
X–8C	Tetrachloroethylene	ug/L	<2.0	<2.0	0
A–01	Tetrachloroethylene	ug/L	<2.0	<2.0	0
X–8B	Total Organic Carbon	mg/L	1.2	1.1	0.1
F–005	Total Suspended Solids	mg/L	2	<1	<2
F–003	Total Suspended Solids	mg/L	2	<1	<2
C–001	Total Suspended Solids	mg/L	10	9	1
C–003	Total Suspended Solids	mg/L	6	8	2
P–019	Total Suspended Solids	mg/L	2	2	0
P–013	Total Suspended Solids	mg/L	6	3	3
H–008	Total Suspended Solids	mg/L	5	4	1
H–004	Total Suspended Solids	mg/L	4	2	2

Table 75
NPDES Duplicate Sample Results

Sample	Analyte	Units	Result 1	Result 2	Difference
K–010	Total Suspended Solids	mg/L	<1	<1	0
F–002	Total Suspended Solids	mg/L	<1	<1	0
F–003	Total Suspended Solids	mg/L	<1	<1	0
K–018	Total Suspended Solids	mg/L	6	7	1
P–019	Total Suspended Solids	mg/L	<1	<1	0
P–013	Total Suspended Solids	mg/L	6	5	1
C–001	Total Suspended Solids	mg/L	2	<1	<2
C–003	Total Suspended Solids	mg/L	<1	<1	0
A–011	Total Suspended Solids	mg/L	2	4	2
C–001	Total Suspended Solids	mg/L	6	6	0
C–003	Total Suspended Solids	mg/L	6	9	3
P–019	Total Suspended Solids	mg/L	2	4	2
P–013	Total Suspended Solids	mg/L	1	5	4
F–003	Total Suspended Solids	mg/L	9	18	9
H–004	Total Suspended Solids	mg/L	9	8	1
H–008	Total Suspended Solids	mg/L	3	3	0
F–005	Total Suspended Solids	mg/L	2	1	1
C–001	Total Suspended Solids	mg/L	4	6	2
C–003	Total Suspended Solids	mg/L	8	6	2
A–011	Total Suspended Solids	mg/L	4	6	2
A–001	Total Suspended Solids	mg/L	1	<1	<1
F–001	Total Suspended Solids	mg/L	<1	3	<3
F–002	Total Suspended Solids	mg/L	3	4	1
L–007	Total Suspended Solids	mg/L	3	6	3
L–008	Total Suspended Solids	mg/L	5	4	1
P–019	Total Suspended Solids	mg/L	9	8	1
P–013	Total Suspended Solids	mg/L	3	2	1
H–002	Total Suspended Solids	mg/L	2	2	0
C–003	Total Suspended Solids	mg/L	6	7	1
P–019	Total Suspended Solids	mg/L	8	6	2
P–013	Total Suspended Solids	mg/L	11	12	1
F–003	Total Suspended Solids	mg/L	<1	6	<6
F–005	Total Suspended Solids	mg/L	2	2	0
H–004	Total Suspended Solids	mg/L	5	5	0
H–008	Total Suspended Solids	mg/L	2	2	0
C–001	Total Suspended Solids	mg/L	8	6	2

Table 75
NPDES Duplicate Sample Results

Sample	Analyte	Units	Result 1	Result 2	Difference
F–001	Total Suspended Solids	mg/L	<1	<1	0
H–002	Total Suspended Solids	mg/L	3	2	1
A–011	Total Suspended Solids	mg/L	1	2	1
F–002	Total Suspended Solids	mg/L	2	2	0
A–001	Total Suspended Solids	mg/L	2	4	2
K–018	Total Suspended Solids	mg/L	4	5	1
P–019	Total Suspended Solids	mg/L	2	4	2
L–008	Total Suspended Solids	mg/L	2	2	0
L–007	Total Suspended Solids	mg/L	2	2	0
C–001	Total Suspended Solids	mg/L	<1	2	<2
C–003	Total Suspended Solids	mg/L	4	2	2
P–013	Total Suspended Solids	mg/L	4	2	2
P–013	Total Suspended Solids	mg/L	3	2	1
C–003	Total Suspended Solids	mg/L	<1	1	<1
F–003	Total Suspended Solids	mg/L	<1	1	<1
F–005	Total Suspended Solids	mg/L	<1	<1	0
H–004	Total Suspended Solids	mg/L	3	4	1
H–008	Total Suspended Solids	mg/L	5	4	1
A–011	Total Suspended Solids	mg/L	1	1.4	0.4
K–018	Total Suspended Solids	mg/L	3	2	1
L–008	Total Suspended Solids	mg/L	1	1	0
P–013	Total Suspended Solids	mg/L	3	2	1
F–001	Total Suspended Solids	mg/L	1	1	0
F–002	Total Suspended Solids	mg/L	1	1	0
H–002	Total Suspended Solids	mg/L	2	1	1
A–001	Total Suspended Solids	mg/L	1	1	0
A–011	Total Suspended Solids	mg/L	2	1	1
C–001	Total Suspended Solids	mg/L	5	1	4
C–003	Total Suspended Solids	mg/L	3	2	1
F–05	Total Suspended Solids	mg/L	<1	<1	0
F–03	Total Suspended Solids	mg/L	<1	<1	0
H–02	Total Suspended Solids	mg/L	<1	<1	0
H–12	Total Suspended Solids	mg/L	1	<1	<1
A–001A	Trichloroethylene	ug/L	<2.0	<2.0	0
A–003	Trichloroethylene	ug/L	<2	<2	0
A–001	Trichloroethylene	ug/L	<2	<2	0

Table 75
NPDES Duplicate Sample Results

Sample	Analyte	Units	Result 1	Result 2	Difference
M–005	Trichloroethylene	ug/L	<2	<2	0
A–001	Trichloroethylene	ug/L	<2	<2	0
A–001A	Trichloroethylene	ug/L	<2	<2	0
A–003	Trichloroethylene	ug/L	<2.0	<2.0	0
M–005	Trichloroethylene	ug/L	<2.0	<2.0	0
A–001A	Trichloroethylene	ug/L	<2.0	<2.0	0
A–003	Trichloroethylene	ug/L	<2.0	<2.0	0
M–005	Trichloroethylene	ug/L	<2.0	<2.0	0
A–003	Trichloroethylene	ug/L	<2.0	<2.0	0
A–001	Trichloroethylene	ug/L	<2.0	<2.0	0
M–005	Trichloroethylene	ug/L	<2.0	<2.0	0
A–003	Trichloroethylene	ug/L	<2.0	<2.0	0
X–8C	Trichloroethylene	ug/L	<2.0	<2.0	0
A–01	Trichloroethylene	ug/L	<2.0	<2.0	0
H–017	Uranium	mg/L	<0.5	<.5	0
F–012	Uranium	mg/L	<0.5	<0.5	0
M–004	Uranium	mg/L	<0.5	<0.5	0
F–013	Uranium	mg/L	<0.5	<0.5	0
F–012	Uranium	mg/L	<0.5	<0.5	0
F–008	Uranium	mg/L	<0.5	<0.5	0
F–008	Uranium	mg/L	<0.5	<0.5	0
H–012	Uranium	mg/L	<0.5	<0.5	0
F–012	Uranium	mg/L	<0.5	<0.5	0
M–004	Uranium	mg/L	<1.5	<1.5	0
F–012	Uranium	mg/L	<0.5	<0.5	0
F–013	Uranium	mg/L	<0.5	<0.5	0
F–012	Uranium	mg/L	<0.5	<0.5	0
F–013	Uranium	mg/L	<0.5	<0.5	0
H–017	Zinc	mg/L	0.155	0.154	0.001
F–012	Zinc	mg/L	0.176	0.179	0.003
F–013	Zinc	mg/L	0.245	0.215	0.03
F–012	Zinc	mg/L	0.342	0.327	0.015
F–008	Zinc	mg/L	0.03	0.017	0.013
F–008	Zinc	mg/L	0.027	0.028	0.001
H–012	Zinc	mg/L	0.028	0.013	0.015
F–012	Zinc	mg/L	0.064	0.053	0.011

Table 75
NPDES Duplicate Sample Results

Sample	Analyte	Units	Result 1	Result 2	Difference
F–012	Zinc	mg/L	0.183	0.194	0.011
F–013	Zinc	mg/L	0.044	0.057	0.013
F–012	Zinc	mg/L	0.183	0.194	0.011
F–013	Zinc	mg/L	0.044	0.057	0.013
H–16	Zinc	mg/L	<0.005	<0.005	0

Table 76
NPDES Blind Sample Results

NPDES Site	Parameter	Units	Result 1	Result 2	Difference
Note:	*The laboratory performing the analyses was Shealy Environmental Services.*				
A–001	1,1,1–Trichloroethane	ug/L	<2	<2	0
Blank	1,1,1–Trichloroethane	ug/L	<2	<2	0
A–011	1,1,1–Trichloroethane	ug/L	<2	<2	0
H–016	Ammonia	mg/L	<0.1	<0.1	0
M–04	Ammonia	mg/L	0.689	<0.1	<.689
DW–004	Biological Oxygen Demand	mg/L	3.9	5	1.1
H–016	Biological Oxygen Demand	mg/L	1.8	4.9	3.1
A–001	Biological Oxygen Demand	mg/L	<1	<1	0
H–016	Chromium	mg/L	<0.01	<0.01	0
A–003	Chromium	mg/L	<0.01	<0.01	0
F–012	Chromium	mg/L	<0.01	<0.01	0
H–016	Copper	mg/L	<0.01	<0.01	0
F–012	Copper	mg/L	<0.01	<0.01	0
X–008	Iron	mg/L	1.22	1.22	0
H–016	Lead	mg/L	<0.02	<0.02	0
F–012	Lead	mg/L	<0.02	<0.02	0
H–016	Manganese	mg/L	<0.01	<0.01	0
F–012	Manganese	mg/L	0.038	0.036	0.002
H–016	Mercury	mg/L	<0.0001	<0.0001	0
F–012	Mercury	mg/L	<0.0001	<0.0001	0
F–012	Nickel	mg/L	<0.01	<0.01	0
M–004	Nitrate	mg/L	142	128	14
A–014	Oil & Grease	mg/L	2.4	1.8	0.6
H–004	Oil & Grease	mg/L	<1	<1	0
F–05	Oil & Grease	mg/L	4.3	5.8	1.5
X–014	Phenol	mg/L	<0.006	<0.006	0
F–012	Silver	mg/L	<0.005	<0.005	0
A–001	Tetrachloroethylene	ug/L	<2	<2	0
Blank	Tetrachloroethylene	ug/L	<2	<2	0
A–011	Tetrachloroethylene	ug/L	<2	<2	0
A–005	Total Suspended Solids	mg/L	<1	2	<2
C–003	Total Suspended Solids	mg/L	6	6	0
F–003	Total Suspended Solids	mg/L	<1	1	<1
A–001	Trichloroethylene	ug/L	<2	<2	0

Table 76
NPDES Blind Sample Results

NPDES Site	Parameter	Units	Result 1	Result 2	Difference
Blank	Trichloroethylene	ug/L	<2	<2	0
A–011	Trichloroethylene	ug/L	<2	<2	0
F–012	Uranium	mg/L	<0.5	<0.5	0
H–016	Zinc	mg/L	0.007	0.012	0.005
F–012	Zinc	mg/L	0.128	0.185	0.057
S–04	Zinc	mg/L	0.583	0.587	0.004

Table 77
QAP Interlaboratory Comparison of Analytical Results

Nuclide	SRS Value[a]	QAP Value[b]	SRS/QAP Ratio	Range	
				Lower Control Limit[c]	Upper Control Limit[c]
March–June 1996					
Air					
Am–241	0.158 ± 0.022	0.189	0.84	0.117	0.365
Ce–144	27. ± 4.	33.3	0.81	20.3	43.6
Co–57	7.6 ± 0.6	8.9	0.85	5.61	11.5
Co–60	27. ± 1.	29.5	0.92	21.8	36.9
Cs–134	13.4 ± 0.4	14.7	0.91	10.3	17.8
Cs–137	6. ± 2.	6.64	0.90	4.78	8.77
GA	1.8 ± 0.13	1.62	1.11	1.33	2.56
GB	1.78 ± 0.11	1.77	1.01	1.33	3.43
Mn–54	3. ± 1.	3.44	0.87	2.61	4.58
Pu–238	0.085 ± 0.014	0.0962	0.88	0.059	0.149
Pu–239	0.094 ± 0.016	0.0927	1.01	0.062	0.146
Ru–106	16. ± 11.	11.6	1.38	6.26	18.4
Sb–125	9.7 ± 0.5	9.78	0.99	3.42	13.7
Sr–90	0.63 ± 0.09[d]	1.06	0.59	0.657	2.4
U–234	0.045 ± 0.009	0.0517	0.87	0.04	0.1
U–238	0.048 ± 0.011	0.0533	0.90	0.043	0.14
Soil					
Cs–137	395. ± 23.	359.	1.10	266.	503.
K–40	502. ± 60.	465.	1.08	326.	739.
Pu–238	42.6 ± 7.2	43.	0.99	9.46	85.6
Pu–239	9.29 ± 1.93	9.23	1.01	5.72	18.4
Sr–90	695. ± 12.[d]	1340.	0.52	777.	3966.
Vegetation					
Co–60	66. ± 6.	59.7	1.11	38.2	89.
Cs–137	1085. ± 44.	944.	1.15	708.	1397.
K–40	1166. ± 124.	1030.	1.13	464.	1555.
Pu–239	9.45 ± 1.37	9.82	0.96	5.89	19.4
Sr–90	806. ± 35.	1300.	0.62	650.	1781.

a Values are Bq/L, Bq/Kg, and Bq/filter.
b Quality Assessment Program conducted by Department of Energy's Environmental Measurements Laboratory (EML), New York
c Control limits were established by EML/QAP from historical data.
d Out of control limits

Table 77
QAP Interlaboratory Comparison of Analytical Results

Nuclide	SRS Value[a]	QAP Value[b]	SRS/QAP Ratio	Range	
				Lower Control Limit[c]	Upper Control Limit[c]
Water					
Am–241	0.832 ± 0.116	0.766	1.09	0.506	1.2
Co–60	34. ± 1.	32.8	1.04	28.5	38.4
Cs–137	44. ± 1.	38.3	1.15	34.5	47.9
GA	1820. ± 41.	1850.	0.98	1018.	2424.
GB	600. ± 18.	744.	0.81	558.	1228.
H–3	214. ± 5.4	251.	0.85	173.	479.
Mn–54	44. ± 1.	38.4	1.15	33.8	46.5
Pu–238	1.04 ± 0.14	0.982	1.06	0.668	1.31
Pu–239	0.81 ± 0.12	0.772	1.05	0.479	1.07
Sr–90	1.63 ± 0.24	1.45	1.12	1.06	2.39
U–234	0.289 ± 0.052	0.274	1.05	0.211	0.403
U–238	0.285 ± 0.051	0.275	1.04	0.215	0.385
September–December 1996					
Air					
Am–241	0.174 ± 0.023	0.222	0.78	0.151	0.446
Co–57	15. ± 1.	14.8	1.01	9.18	18.1
Co–60	9.3 ± 0.6	8.64	1.08	6.39	10.7
Cs–134	11. ± 2.	10.8	1.02	7.78	13.1
Cs–137	9. ± 1.	8.52	1.06	6.13	11.2
GA	0.65 ± 0.08	1.15	0.57	0.955	1.78
GB	0.49 ± 0.06	0.5	0.98	0.365	0.92
Mn–54	7. ± 1.	6.35	1.10	4.76	8.07
Pu–238	0.098 ± 0.016	0.118	0.83	0.073	0.172
Ru–106	12. ± 6.	10.8	1.11	6.26	14.
Sb–125	12. ± 1.	10.8	1.11	6.48	15.
Sr–90	0.22 ± 0.19[d]	0.526	0.42	0.347	1.39
U–234	0.062 ± 0.011[d]	0.08	0.78	0.064	0.165
U–238	0.064 ± 0.011	0.078	0.82	0.061	0.234

a Values are Bq/L, Bq/Kg, and Bq/filter.
b Quality Assessment Program conducted by Department of Energy's Environmental Measurements Laboratory (EML), New York
c Control limits were established by EML/QAP from historical data.
d Out of control limits

Table 77
QAP Interlaboratory Comparison of Analytical Results

Nuclide	SRS Value[a]	QAP Value[b]	SRS/QAP Ratio	Range	
				Lower Control Limit[c]	Upper Control Limit[c]
Soil					
Co–60	3. ± 1.	2.92	1.03	1.46	4.38
Cs–137	1762. ± 233.	1550.	1.14	1240.	2077.
K–40	342. ± 58.	300.	1.14	219.	501.
Pu–238	1.02 ± 0.04	1.13	0.90	0.452	2.15
Pu–239	25.5 ± 3.7	21.8	1.17	14.4	42.1
Sr–90	84. ± 9.	69.9	1.20	32.2	199.
Vegetation					
Am–241	2.16 ± 0.59	1.23	1.76	0.836	3.42
Co–60	11. ± 2.	10.9	1.01	6.76	15.5
Cs–137	223. ± 6.	190.	1.17	154.	276.
K–40	1182. ± 52.	992.	1.19	784.	1488.
Pu–239	2.12 ± 0.52	1.96	1.08	1.27	3.82
Sr–90	1360. ± 49.	1390.	0.98	667.	1793.
Water					
Am–241	1.27 ± 0.043	1.08	1.18	0.691	1.87
Co–60	68. ± 3.	61.1	1.11	56.2	72.1
Cs–137	100.± 5.	89.5	1.12	80.6	115.
GA	1810. ± 56.[d]	1210.	1.50	605.	1561.
GB	678. ± 27.	540.	1.26	324.	886.
H–3	462. ± 13.	587.	0.79	382.	1121.
Mn–54	68. ± 2.	60.5	1.12	52.6	73.8
Pu–238	2.27 ± 0.25	1.91	1.19	1.41	2.43
Pu–239	1.± 0.13	0.84	1.19	0.655	1.19
Sr–90	2.43 ± 1.2	2.71	0.90	1.95	4.5
U–234	0.509 ± 0.074	0.48	1.06	0.37	0.734
U–238	0.512 ± 0.072	0.48	1.07	0.37	0.648

a Values are Bq/L, Bq/Kg, and Bq/filter.
b Quality Assessment Program conducted by Department of Energy's Environmental Measurements Laboratory (EML), New York
c Control limits were established by EML/QAP from historical data.
d Out of control limits

Table 78
QAD Interlaboratory Comparison of Analytical Results

Sample Date	Nuclide	SRS Value	QAD[a] Value	SRS/QAD Ratio	Range	
					Lower Control Limit[b]	Upper Control Limit[b]
Water Samples (pCi/L)						
01–26–96	Alpha	9.9 ± 3.5	12.1 ± 5.0	0.82	3.4	20.8
04–16–96		58.4 ± 8.5	74.8 ± 18.7	0.78	42.4	107.2
07–19–96		17.9 ± 10	24.4 ± 6.1	0.73	13.8	35.0
10–25–96		4.6 ± 2.9	10.3 ± 5.8	0.45	1.6	19.8
06–07–96	Ba–133	706 ± 10	745 ± 75	0.95	615.2	874.8
01–26–96	Beta	4.9 ± 2.7	7.0 ± 5.0	0.70	–1.7	15.7
04–16–96		104 ± 1.6[c]	166.9 ± 25.0	0.62	123.6	210.2
07–19–96		35.2 ± 4[c]	44.8 ± 5.0	0.79	36.1	53.5
10–25–96		21.2 ± 5.1	34.6 ± 5.0	0.61	25.9	43.3
04–16–96	Co–60	33.1 ± 2.2	31.0 ± 5.0	1.07	22.3	39.7
06–07–96		99 ± 11	99 ± 5	1.00	90.3	107.7
04–16–96	Cs–134	42.9 ± 2.5	46.0 ± 5.0	0.93	37.3	54.7
06–07–96		72 ± 10	79 ± 5	0.91	70.3	87.7
04–16–96	Cs–137	53.7 ± 4.0	50.0 ± 5.0	1.07	41.3	58.7
06–07–96		206 ± 8	197 ± 10	1.05	179.7	214.3
03–08–96	H–3	20000 ± 277	22002 ± 2200	0.91	18194	25810
08–09–96		10040 ± 200	10879 ± 1088	0.92	8996	12762
01–23–96	Sr–89	55 ± 7[c]	73 ± 5	0.75	64.3	81.7
07–12–96		20.7 ± 3.5	25 ± 5	0.83	16.3	33.7
01–23–96	Sr–90	6 ± 5	5 ± 5	1.20	–3.7	13.7
07–12–96		9.3 ± 2.8	12.0 ± 5.0	0.78	3.3	20.7
04–16–96	U nat	54.1 ± 2.6	58.4 ± 5.8	0.93	48.4	68.4
06–07–96	Zn–65	319 ± 20	300 ± 30	1.06	248.1	351.9

a EPA Quality Assurance Division
b Control limits were established by EPA National Exposure Research Laboratory Characterization Research Division–Las Vegas.
c Out of control limits

Table 79
Gamma Spectrometry Program Interlaboratory Evaluation of Analytical Results

Nuclide	Sample #	SRS Value	MDA	EML[a] Value	Ratio	Evaluation
Note: A= Acceptable						
W= Acceptable with warning						
N= Not acceptable						
ND= Present but not detected						
FP= False positive (not present but reported)						
CD 109	1	8.00 ± 6.00	4.20			FP
CE 144	1	122.00 ± 16.00	1.10	128.00	0.95	A
CO 57	1	12.00 ± 1.00	0.10	12.00	1.00	A
CS 137	1	21.00 ± 3.00	0.30	21.00	1.00	A
MN 54	1	18.00 ± 2.00	0.20	17.00	1.06	A
NP 237	1	2.50 ± 1.70	1.30			FP
BE 7	2	5.00 ± 2.00	1.30	5.10	0.98	A
CE 144	2	8.00 ± 2.00	0.80	8.00	1.00	A
NB 95	2	4.90 ± 0.70	0.10	4.70	1.04	A
PB 210	2			3.30		ND
RU 103	2	4.60 ± 0.80	0.20	4.70	0.98	A
ZR 95	2	2.10 ± 0.40	0.20	2.00	1.05	A
BA 140	3	8.00 ± 2.00	1.20	10.00	0.80	W
CE 141	3	1.30 ± 0.40	0.40	1.30	1.00	A
CE 144	3	3.40 ± 2.00	2.00	3.00	1.13	W
CS 134	3	5.30 ± 0.50	0.30	5.40	0.98	A
CS 136	3	3.50 ± 0.30	0.20	3.60	0.97	A
CS 137	3	5.70 ± 0.90	0.30	5.90	0.97	W
DY 166	3			7.20		ND
I 131	3	16.00 ± 2.00	0.30	16.20	0.99	A
NB 95	3	7.00 ± 1.00	0.20	7.40	0.95	A
RU 103	3	5.50 ± 1.00	0.30	6.00	0.92	A
SB 125	3	2.20 ± 0.70	0.90	2.00	1.10	A
SB 126	3			3.10		ND
TE 132	3	26.00 ± 5.00	0.20	23.00	1.13	A
XE 133	3			6.40		ND
ZR 95	3	2.40 ± 0.40	0.40	2.30	1.04	A

a DOE's Environmental Measurements Laboratory

Table 80
Metals Analysis on Split Duplicate Samples

Parameter	RM–120		4M–A7	
	Weston	Shealy	Weston	Shealy
First Quarter	(mg/L)			
Aluminum	0.969	0.37	0.912	0.599
Cadmium	<0.0047	<0.005	<0.047	<0.005
Calcium	3.63	3.28	2.91	2.94
Chromium	0.0013	<0.01	0.0018	<0.01
Copper	0.0028	<0.01	0.0031	<0.01
Iron	1.17	1.25	1.16	1.24
Lead	<0.047	<0.02	<0.047	<0.02
Magnesium	1.37	1.23	0.666	0.712
Manganese	0.0603	<0.01	0.147	<0.01
Nickel	<0.026	<0.01	<0.026	<0.01
Sodium	7.97	6.26	6.67	6.16
Zinc	0.0188	<0.005	0.0297	<0.005

	RM–160		U3R–4	
	Weston	Shealy	Weston	Shealy
Second Quarter	(mg/L)			
Aluminum	0.69	0.707	0.38	0.426
Cadmium	<0.0047	<0.005	<0.0047	<0.005
Calcium	3.46	2.98	1.94	1.48
Chromium	0.0019	<0.01	0.0025	<0.01
Copper	<0.0082	<0.01	0.0127	<0.01
Iron	1.12	1.13	0.853	0.81
Lead	0.0053	<0.02	0.0051	<0.02
Magnesium	1.26	1.25	0.375	0.384
Manganese	0.0882	0.08	0.0413	0.035
Nickel	0.0026	<0.01	<0.026	<0.01
Sodium	6.51	6.15	1.62	0.62
Zinc	0.0154	<0.005	0.0133	<0.005

Table 80
Metals Analysis on Split Duplicate Samples

	4M–A7		RM–120	
Parameter	Weston	Shealy	Weston	Shealy
Third Quarter	(mg/L)			
Aluminum	0.18	0.212	0.226	0.335
Cadmium	<0.0047	<0.005	<0.0047	<0.005
Calcium	3.08	2.96	4.59	4.01
Chromium	<0.007	<0.01	<0.007	<0.01
Copper	<0.0148	0.045	<0.008	<0.005
Iron	0.858	0.844	0.582	0.723
Lead	<0.0124	<0.003	<0.0066	<0.003
Magnesium	0.545	0.548	1.27	1.15
Manganese	0.0699	0.068	0.0699	0.063
Nickel	<0.026	<0.01	<0.026	<0.01
Sodium	11.6	13.5	10.9	11.9
Zinc	<0.0362	0.056	<0.0092	0.029

Table 81
Metals Analysis on Split Blind Quarterly Composites

	Weston				Shealy			
Metals	**Duplicate 1**	**Duplicate 2**	**Duplicate 3**	**Average**	**Duplicate 1**	**Duplicate 2**	**Duplicate 3**	**Average**
First Quarter				(mg/L)				
Aluminum	0.255	0.251	0.255	0.254	0.205	<.05	<.05	<0.102
Cadmium	<0.0047	<0.0047	0.0005	0.0000	<0.005	<0.005	<0.005	<0.005
Calcium	3.88	4.03	4.06	3.99	3.76	3.58	3.83	3.7233
Chromium	0.00099	0.0014	0.0016	0.0013	<0.01	<0.01	<0.01	<0.01
Copper	0.0066	0.0062	0.007	0.0066	<0.01	<0.01	<0.01	<0.01
Iron	0.457	0.484	0.502	0.481	0.487	0.47	0.478	0.4783
Lead	<0.047	<0.047	<0.047	0.000	<0.02	<0.02	<0.02	<0.02
Magnesium	0.656	0.684	0.687	0.676	0.665	0.676	0.705	0.6820
Manganese	0.0385	0.0405	0.041	0.0400	0.044	<0.01	0.044	<.033
Nickel	<0.026	<0.026	<0.026	0.000	<0.01	<0.01	<0.01	<0.01
Sodium	3.87	4.09	4.09	4.02	2.95	3.02	3.10	3.02
Zinc	0.0094	0.0102	0.0139	0.0112	<0.005	<0.005	<0.005	<0.005
	Weston				Shealy			
Second Quarter				(mg/L)				
Aluminum	0.138	0.259	0.147	0.1813	0.344	0.353	0.321	0.339
Cadmium	<0.0047	<0.0047	<0.0047	<0.0047	<0.005	<0.005	<0.005	<0.005
Calcium	4.26	4.33	4.46	4.3500	4.11	3.72	3.69	3.84
Chromium	0.0011	0.0026	0.0014	0.0017	<0.01	<0.01	<0.01	<0.01
Copper	0.0181	0.0208	0.0251	0.0213	<0.01	<0.01	<0.01	<0.01
Iron	0.608	0.754	0.611	0.6577	0.809	0.793	0.717	0.773

Table 81
Metals Analysis on Split Blind Quarterly Composites

Metals	Weston				Shealy			
	Duplicate 1	Duplicate 2	Duplicate 3	Average	Duplicate 1	Duplicate 2	Duplicate 3	Average
Lead	<0.047	0.0049	0.0052	<0.0052	< 0.02	<0.02	<0.02	<0.02
Magnesium	0.7	0.692	0.694	0.6953	0.76	0.683	0.691	0.711
Manganese	0.0996	0.0977	0.0976	0.0983	0.095	0.088	0.088	0.090
Nickel	<0.026	<0.026	<0.0026	<0.0026	<0.01	<0.01	<0.01	<0.01
Sodium	4.42	4.42	4.46	4.4333	3.71	3.35	3.44	3.50
Zinc	0.0119	0.0099	0.0151	0.0225	<0.005	<0.005	<0.005	<0.005

Third Quarter	Weston			Shealy		
	(mg/L)					
Note: Only two duplicate samples were sent to the laboratories in the third quarter.						
Aluminum	0.272	0.23	0.2510	0.242	0.151	0.1965
Cadmium	<0.0047	<0.047	0.0000	<0.005	<0.005	0.0000
Calcium	4.31	4	4.1550	4.01	4.06	4.0350
Chromium	0.0015	0.0013	0.0014	<0.01	<0.01	0.0000
Copper	0.0244	0.0228	0.0236	<0.005	<0.005	0.0000
Iron	0.709	0.633	0.6710	0.723	0.585	0.6540
Lead	<0.0665	<0.0103	<0.0665	<0.003	<0.003	0.0000
Magnesium	0.668	0.623	0.6455	0.638	0.689	0.6635
Manganese	0.0997	0.0924	0.0961	0.095	0.096	0.0955
Nickel	<0.026	<0.026	0.0000	<0.01	<0.01	0.0000
Sodium	4.64	4.35	4.4950	6.33	6.75	6.5400
Zinc	<0.0183	<0.0124	0.0000	0.025	<0.005	0.0000

Table 82
Savannah River Swamp (Creek Plantation) Survey — Soil Results

Trail	Distance (Feet from Savannah River)	Depth (Inches)	Cs-137 (pCi/g)	Co-60 (pCi/g)	Sr-89,90 (pCi/g)
Note:	*Blank spaces indicate activity was less than the lower limits of detection (2.4E–02 pCi/g for Cs-137; 2.9E–02 pCi/g for Co-60; 1.9E–01 pCi/g for Sr-89,90).*				
1	0	0–3	3.54E+00 ± 1.90E–01		
1	585	0–3	4.30E+00 ± 2.05E–01	3.98E–02 ± 2.75E–02	
1	1175	0–3	1.03E+01 ± 3.60E–01	3.82E–02 ± 2.09E–02	
1	1805	0–3	3.70E+01 ± 1.06E+00	1.21E–01 ± 2.18E–02	
1	2150	0–3	3.53E+01 ± 1.01E+00	1.47E–01 ± 1.40E–02	1.69E–01 ± 3.65E–02
1	2150	3–6	6.51E+01 ± 1.85E+00	2.61E–01 ± 2.01E–02	
1	2150	6–9	2.39E+01 ± 7.12E–01	1.00E–01 ± 1.51E–02	1.81E–01 ± 3.41E–02
1	2150	9–12	3.98E+01 ± 1.21E+00	3.98E–01 ± 2.10E–02	1.39E–01 ± 3.50E–02
1	2640	0–3	3.88E–01 ± 3.86E–02		
2	0	0–3	6.99E–01 ± 6.17E–02		
2	680	0–3	1.04E+00 ± 7.31E–02		
2	1330	0–3	8.93E–01 ± 7.42E–02		
2	1960	0–3	4.57E–01 ± 5.79E–02		
2	2620	0–3	4.18E–01 ± 5.70E–02		
2	3100	0–3	4.24E–01 ± 6.15E–02		
2	3100	3–6	8.05E–02 ± 2.64E–02		
2	3100	6–9	2.54E–01 ± 4.56E–02		
2	3100	9–12	3.18E–01 ± 0.40E–02		
2	3200	0–3	2.03E–01 ± 3.90E–02	5.54E–02 ± 2.49E–02	
3	0	0–3			
3	920	0–3	5.16E–02 ± 2.33E–02		
3	920	3–6	5.77E–02 ± 1.01E–02		
3	920	6–9	7.50E–02 ± 1.32E–02		
3	920	9–12	6.64E–02 ± 2.02E–02		
3	2055	0–3	7.13E–02 ± 2.37E–02		
4	0	0–3	1.60E–01 ± 2.89E–02		
4	960	0–3	1.83E+00 ± 0.71E–02		2.82E–01 ± 4.39E–02
4	1245	0–3	1.65E+00 ± 9.63E–02		1.64E–01 ± 3.62E–02
4	1690	0–3	5.80E+01 ± 1.82E+00	1.70E–01 ± 2.03E–02	1.51E–01 ± 3.56E–02
4	1900	0–3	5.15E+01 ± 1.45E+00	1.22E–01 ± 2.59E–02	
4	1900	3–6	6.53E+01 ± 2.07E+00	1.95E–01 ± 1.81E–02	

Table 82
Savannah River Swamp (Creek Plantation) Survey — Soil Results

Trail	Distance (Feet from Savannah River)	Depth (Inches)	Cs-137 (pCi/g)	Co-60 (pCi/g)	Sr-89,90 (pCi/g)
4	1900	6–9	2.92E+01 ± 8.36E–01	7.67E–02 ± 1.32E–02	
4	1900	9–12	3.32E+01 ± 9.47E–01	1.27E–01 ± 2.38E–02	
4	2390	0–3	Not Collected	Not Collected	Not Collected
5	0	0–3	1.69E–01 ± 3.35E–02		
5	1750	0–3	9.40E+00 ± 4.40E–01		1.25E–01 ± 3.43E–02
5	1880	0–3	Not Collected	Not Collected	Not Collected
5	2100	0–3	1.18E+00 ± 7.83E–02	3.88E–02 ± 2.80E–02	
5	2100	3–6	5.43E–01 ± 4.68E–02		
5	2100	6–9	7.18E–01 ± 5.72E–02		
5	2100	9–12	4.30E–01 ± 3.81E–02		
5	2535	0–3	1.33E–01 ± 3.07E–02		
6	0	0–3	1.06E+00 ± 7.32E–02		
6	1800	0–3	1.03E+01 ± 3.59E–01	6.48E–02 ± 2.23E–02	
6	2300	0–3	Not Collected	Not Collected	Not Collected
6	2530	0–3	3.54E+01 ± 1.18E+00	1.27E–01 ± 2.08E–02	
6	2530	3–6	1.95E–01 ± 8.27E–01	4.21E–02 ± 2.93E–02	
6	2530	6–9	2.92E+01 ± 8.36E–01	7.67E–02 ± 1.32E–02	
6	2530	9–12	7.57E+00 ± 3.40E–01	3.12E–02 ± 2.73E–02	
6	2680	0–3	9.20E–01 ± 6.96E–02		
7	0	0–3	4.92E–01 ± 5.87E–02	5.13E–02 ± 2.93E–02	
7	1900	0–3	1.76E+00 ± 1.28E–01	4.23E–02 ± 3.76E–02	
7	2600	0–3	2.05E+01 ± 8.66E–01		
7	2700	0–3	3.77E+01 ± 1.08E+00	5.13E–02 ± 2.67E–02	
7	2700	3–6	1.82E+01 ± 6.19E–01	3.72E–02 ± 2.21E–02	
7	2700	6–9	4.56E+01 ± 1.32E+00	7.79E–02 ± 2.38E–02	
7	2700	9–12	5.65E+01 ± 1.62E+00	7.64E–02 ± 2.73E–02	
7	3100	0–3	7.29E–01 ± 4.20E–02		
7	3200	0–3	9.55E–01 ± 7.61E–02		
8	0	0–3	2.30E–01 ± 3.85E–02		
8	550	0–3	8.51E–01 ± 4.78E–02		
8	915	0–3	2.27E+00 ± 1.47E–01		
8	1460	0–3	1.76E+00 ± 6.88E–02	4.37E–02 ± 1.76E–02	
8	2005	0–3	1.32E+00 ± 5.61E–02		

Table 82
Savannah River Swamp (Creek Plantation) Survey — Soil Results

Trail	Distance (Feet from Savannah River)	Depth (Inches)	Cs-137 (pCi/g)	Co-60 (pCi/g)	Sr-89,90 (pCi/g)
8	2670	0–3	6.31E+00 ± 2.95E–01	7.92E–02 ± 3.07E–02	
8	2900	0–3	7.19E+01 ± 3.02E+00	5.46E–02 ± 4.50E–02	
8	2900	3–6	9.88E+01 ± 2.81E+00	2.02E–01 ± 2.14E–02	1.45E–01 ± 3.43E–02
8	2900	6–9	5.72E+01 ± 2.40E+00	5.97E–02 ± 4.00E–02	
8	2900	9–12	1.84E+01 ± 5.44E–01		
8	3000	0–3	1.79E+00 ± 1.10E–01	3.93E–02 ± 2.77E–02	
9	0	0–3	3.19E–01 ± 3.20E–02	8.61E–02 ± 1.39E–02	
9	1680	0–3	1.93E+01 ± 5.71E–01	5.72E–02 ± 1.57E–02	
9	2035	0–3	1.70E+01 ± 7.24E–01	5–49E–02 ± 3.08E–02	
9	2200	0–3	6.20E+01 ± 1.81E+00	1.34E–01 +/ 1.86E–02	1.31E–01 ± 3.53E–02
9	2200	3–6	4.30E+01 ± 1.33E+00	9.51E–02 ± 1.88E–02	
9	2200	6–9	2.77E+01 ± 8.31E–01	9.57E–02 ± 1.73E–02	
9	2200	9–12	7.45E+00 ± 3.53E–01	3.64E–02 ± 2.58E–02	
9	2525	0–3	1.10E+00 ± 7.18E–02		
10	0	0–3	1.40E+01 ± 5.98E–01	4.48E–02 ± 2.49E–02	
10	100	0–3	1.39E+01 ± 4.73E–01		
10	100	3–6	1.04E+01 ± 3.57E–01		
10	100	6–9	8.38E+00 ± 2.32E–01		
10	100	9–12	5.53E+00 ± 2.67E–01		
10	240	0–3	1.42E+00 ± 8.92E–02	2.90E–02 ± 2.22E–02	1.91E–01 ± 3.89E–02

Table 83
Savannah River Swamp (Creek Plantation) Survey — Vegetation Results

Trail	Distance (Feet from Savannah River)	Cs-137 (pCi/g)	Co-60 (pCi/g)	Sr-89,90 (pCi/g)
Note:	*Blank spaces indicate activity was less than the lower limits of detection (1.0E–01 pCi/g for Cs-137; 1.0E–01 pCi/g for Co-60; 4.76E–01 pCi/g for Sr-89,90).*			
1	0	2.47E–01 ± 7.18E–02		
1	585	2.31E–01 ± 4.82E–02		
1	1175	3.85E+00 ± 3.19E–01		
1	1805	1.63E+01 ± 7.92E–01		
1	2150	1.04E+01 ± 7.60E–01		1.61E+00 ± 2.11E–01
1	2640	3.11E–01 ± 8.29E–02		9.08E–01 ± 1.48E–01
2	0	2.67E–01 ± 5.00E–02		
2	680	3.35E–01 ± 1.33E–01	2.54E–01 ± 8.82E–02	
2	1330	5.30E–01 ± 8.28E–02		
2	1960	1.08E–01 ± 6.38E–02		
2	2620	2.09E–01 ± 6.43E–02	1.61E–01 ± 6.15E–02	
2	3100	4.00E–01 ± 1.11E–01		
2	3200	3.09E–01 ± 1.18E–01		
3	0			
3	920			
3	2055			
4	0			
4	960	2.15E+00 ± 2.10E–01		
4	1245	2.83E+00 ± 2.45E–01		
4	1690	Not Collected	Not Collected	Not Collected
4	1900	Not Collected	Not Collected	Not Collected
4	2390	Not Collected	Not Collected	Not Collected
5	0	3.84E–01 ± 8.58E–02	1.37E–01 ± 5.85E–02	
5	1750	2.63E+00 ± 2.41E–01		
5	1880	Not Collected	Not Collected	Not Collected
5	2100			
5	2535	2.04E–01 ± 4.62E–02		7.38E–01 ± 1.41E–01
6	0	2.35E–01 ± 1.07E–01		
6	1800	2.78E+00 ± 2.67E–01		
6	2300	Not Collected	Not Collected	Not Collected
6	2530	2.94E+01 ± 1.50E+00		

Table 83
Savannah River Swamp (Creek Plantation) Survey — Vegetation Results

Trail	Distance (Feet from Savannah River)	Cs-137 (pCi/g)	Co-60 (pCi/g)	Sr-89,90 (pCi/g)
6	2680	2.46E–01 ± 1.13E–01		5.07E–01 ± 1.58E–01
7	0	Not Collected	Not Collected	Not Collected
7	1900	5.01E–01 ± 8.97E–02		
7	2600	6.38E+01 ± 4.62E+00	2.03E–01 ± 1.02E–01	6.29E–01 ± 1.35E–01
7	2700	1.04E+01 ± 7.45E–01		8.97E–01 ± 1.49E–01
7	3100	2.44E–01 ± 4.64E–02		
7	3200	1.30E–01 ± 3.09E–02		7.56E–01 ± 1.71E–01
8	0		1.66E–01 ± 6.68E–02	
8	550	1.25E–01 ± 6.43E–02		
8	915	3.79E–01 ± 1.08E–01		
8	1460	3.10E–01 ± 9.55E–02		
8	2005	1.28E–01 ± 3.46E–02		
8	2670	1.20E+00 ± 1.48E–01		
8	2900	2.95E–01 ± 1.10E–01		
8	3000	2.65E–01 ± 4.03E–02		8.10E–01 ± 1.74E–01
9	0	Not Collected	Not Collected	Not Collected
9	1680	Not Collected	Not Collected	Not Collected
9	2035	2.71E–01 ± 9.91E–02		
9	2200			
9	2525	3.33E+00 ± 3.27E–01		
10	0	2.61E+00 ± 1.57E–01		
10	100	3.95E+00 ± 3.48E–01		6.48E–01 ± 1.65E–01
10	240	5.06E–01 ± 6.20E–02	1.09E–01 ± 7.89E–02	

Errata from 1995 Report

The following information was either incorrect in, or missing from, *Savannah River Site Environmental Data for 1995*, WSRC–TR–96–0077:

Figure 11, Nonradiological Sampling Locations — SRS Stream and Savannah River Sediment, p. 11, contained a mislabeled sampling location. The location designated on the map as L3R–2 is the proper location for sediment sampling; however, the location should have been labeled L3R–3.

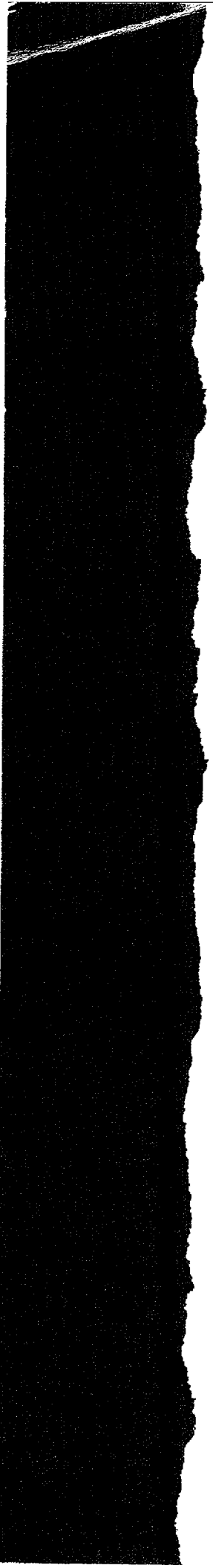
Table 12, Calculated Migration of Radioactivity from Seepage Basins, pp. 36–37, should have included the following 1995 data for total strontium:

		Total Strontium (Millicuries)				
Location	**Source Description**	**1991**	**1992**	**1993**	**1994**	**1995**
FMA7–(FM3A+FM2B)	200–F seepage basins to Four Mile Creek	460	194	150	78	111
FM2B–FM1C	200–H seepage basins to Four Mile Creek	72	78	65	35	40

Table 62, Dose from Consumption of Fish from SRS Creek Mouths and River Mile, pp. 158–159, was misnamed. The title of the table should have been Dose from Consumption of Fish from SRS Creek Mouths and River Mile 120.

An analytical result was missing from table 74, Fish Surveillance: Mercury, pp. 236–237. The Beaver Dam Creek @ Creek Mouth location should have appeared as follows:

	Mercury (µg Hg/g – Parts Per Million)			
Location/Species	**Analytical Results**		**Min**	**Max**
Beaver Dam Creek @ Creek Mouth				
Bass	0.63	0.83	0.63	0.83



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