

US EPA ARCHIVE DOCUMENT

Table 1. Analytes, sample containers, preservatives and holding times for samples collected for the Savannah River Mercury TMDL ambient sampling, July 24 - September 19, 2000.

MATRIX	ANALYSIS	LAB	CONTAINER	PRESERVATIVE	HOLDING TIMES	METHODS
WATER	TOC	TVA	500 ml poly	H ₂ SO ₄ < 2	28 Days	
	Sulfate	TVA	125 ml poly	ice	28 Days	
	Sulfide	ESAT	60 ml syringe	zinc acetate/NaOH	ASAP	8131a
	TSS	OVERFLOW	½ gallon	ice	7 Days	
	TP, TKN	OVERFLOW	8 oz. glass	H ₂ SO ₄ < 2	28 Days	365.1, 351.2
	THg, MeHg	BATTELLE	Teflon 500 ml	unfiltered/preserved in lab	28 Days	
SEDIMENT	Sulfide (Pore H ₂ O)	ESAT	30 ml syringe	zinc acetate/NaOH	ASAP	8131a
	TP,TKN, Sulfate % Moisture	EPA	8 oz container	ice	28 Days	
	THg & MeHg	BATTELLE	4 oz. container	frozen	28 Days	
	Ash Free Dry Weight	EPA	4 oz. container	frozen		
SOIL	TP ,TKN, Sulfate % Moisture	EPA	8 oz container	ice	28 Days	
	THg, MeHg	BATTELLE	4 oz. container	frozen	28 Days	
	Ash Free Dry Weight	EPA	4 oz. container	frozen		
FISH	THg	BATTELLE	5 individual fish samples, skinless filets	frozen	28 Days	

TP = Total Phosphorus ; TN = Total Nitrogen; THg = Total Mercury; MeHg = Methyl Mercury; TKN = Total Kjeldahl Nitrogen; TSS = Total Suspended Solids; TOC = Total Organic Carbon.

Table 2. Key for point source sample numbers with analytical results for the Savannah River Mercury TMDL Study, July - August 2000.

Facility Name	NPDES #	Date Sampled (July 2000)	Time Sampled	Field Sample # (SVPS_)	Influent		Effluent		Ambient	Air	Field Blank	Comment
					MeHg (ng/L)*	Total Hg (ug/L)*	MeHg (ng/L)*	Total Hg (ug/L)*	MeHg (ng/L)*		Total Hg (ug/L)*	
Augusta, Butler Creek	GA-0037621	25	1125	U13	0.96	0.07			0.0423		0.000440J	
		25	1130	U14								
		25	1155	U15			0.26	0.003	0.55		0.000367J	
		25	1155	U16								
Budget Inn	GA-0034096	26	1316	L30					0.0216U		0.000329J	
		26	1320	L31			0.02U	0.001				
Citgo Asphalt	GA-0004332	26	1544	L34					0.0222U		0.000569J	
		26	1547	L35			0.76	0.02				
Columbia Co. Health Dept.	GA-0049735	26	1337	U30					0.0457		0.000147J	
		26	1338	U31			0.09U	0.0005U				
Commerce, Davis Bro. Pond	GA-0032646	24	1100	U1					0.0206U		0.000374UJ	
		24	1123	U3			0.14	0.007				
DHR Gracewood Hospital	GA-0047279	25	1455	U19	1.9	0.17			0.0383		0.0000523J	
		25	1500	U20								
		25	1515	U21			1.1	0.06	0.0217U		0.000190J	
		25	1510	U22								
Dogwood Land MHP	GA-0034282	24	1500	U7					0.0204U		0.000237J	
		24	1505	U8			0.02U	0.001				
E. M. Industries	GA-0034355	26	1435	L32					0.0222U		0.000496J	
		26	1440	L33			0.02U	0.0008				
Homer Housing Authority	GA-0030031	24	1340	U5					0.0211U		0.000152J	
		24	1345	U6			0.02U	0.002				
Int'l Paper Co., Augusta	GA-0002801	26	1050	U27					0.0223U		0.000345J	
		26	1055	U28			0.99	0.01				Field dup of U28
		26	1057	U29			li	0.01				process wastewater
Kerr McGee (Outfall 1) (Kemira)	GA-0003646	26	930	L24			0.02U	0.002				
		26	921	L25					0.0220U		0.000282U	
Kerr McGee (Outfall 2) (Kemira)	GA-0003646	26	940	L26			0.2	0.11				gypsum discharge
Kwikset	WQ-IP-191	26	835	L4					0.0224U		0.0000233J	
			838	L5			0.02U	0.001				
Olin Corporation	GA-0003719	26		U25					0.0514		0.000497J	
		26		U26			0.84	1.6				
Pooler WWTP	GA-0047066	25	1740	L18					0.0214U		0.000286J	
		25	1745	L19			0.56	0.002				
Richmond County Landfill	WQ-IP-154	25	1340	U17					0.0224U		0.000596J	
		25	1345	U18			5.2	0.01				
Richmond Co./Spirit Creek WWTP	GA-0047147	25	1010	U11					0.0211U		0.000265J	
		25	1015	U12			3	0.009				
Savannah WWTP	GAWP100000	26	748	L20					0.0213U		0.000223J	
		26	800	L21			0.09U	0.002				Field dup of L21
		26	801	L22			0.1U	0.003				
		26	825	L23	3.5	0.13						
Sylvania WWTP	GA-0021385	25	1318	L9					0.0284		0.000321J	
		25	1320	L10			0.16	0.01				Field dup of L10
		25	1321	L11			0.11U	0.01				
		25	1335	L12	3.9	0.15						
Sylvania Yarns	WQ-IP-047	25	1515	L15					0.0215U		0.000759J	
		25	1520	L16			0.17	0.003				
Torrington, Screven County	WQ-IP-008	25	1432	L13					0.0215U		0.000783J	
		25	1434	L14			0.32	0.007				
Tybee WWTP	GA-0020061	26	1126	L27					0.0218U		0.000324J	
		26	1133	L28	1.4	0.08						
		26	1137	L29			0.09U	0.002				
Vogtle Southern Nuclear	GA-0026786	25	1015	L6	0.19	0.003						
		25	1115	L7					0.0449		0.000745J	
		25	1130	L8			0.255	0.00841				
Waynesboro WWTP	GA-0020231	24	1634	L1					0.0203U		0.000237J	
		24	1650	L2			0.02U	0.002				
		24	1700	L3	1.8	0.4						

Data qualifiers:

U - Material was analyzed for but not detected. The number is the minimum quantitation limit. J - Estimated value.

* - Note: methyl mercury is reported in units of ng/L; total mercury is reported in ug/L.

**Table 3. Water sample location coordinates for the Savannah River mercury TMDL study,
July - August 2000.**

LOCATION	STATION ID	NORTH	WEST
Lake Hartwell	R-1 (Tail Race)	34.35442	82.81743
	R-1 (Forebay)	34.35442	82.82813
Lake Russell	R-2 (Tail Race)	34.01698	82.59740
	R-2 (Forebay)	34.03415	82.60378
Lake Thurmond	R-3 (Tail Race)	33.65733	82.20063
	R-3 (Forebay)	34.67118	82.20778
SR below Thurmond Dam	M-0	33.64644	82.20069
Horse Creek	T-1	33.46086	81.92126
SR below Horse Creek	M-1	33.36698	81.92025
Butler Creek	T-2	33.38968	81.97238
SR below Butler Creek	M-2	33.35755	81.93579
Upper Three Runs	T-3	33.22239	81.77422
SR below Upper Three Runs	M-3	33.21087	81.76654
Lower Three Runs (estimated)	T-4	33.03025	81.51381
SR below Lower Three Runs	M-4	33.02196	81.51108
Brier Creek	T-5	32.78620	81.43168
SR below Brier Creek	M-5	32.77753	81.41478
SR near Clyo, GA	M-6	32.51148	81.23293
Ebenezer Creek	T-6	32.38468	81.19685
SR below Ebenezer Creek	M-7	32.37842	81.17952
SR above Point Wentworth	M-8	32.18622	81.15178
SR below Point Wentworth	M-8B	32.14595	81.14050

SR - Savannah River

R - Reservoir

M - mainstem Savannah River

T - Savannah River tributary

Table 4. *In situ* water quality information for sampling stations in the Savannah River, July-August 2000.

Station ID	Location	Date Sampled	Time	Depth (Ft)	Temp. °C	DO (mg/L)	pH	Conductivity (uS/cm)
M-0	SR below Thurmond Dam	07/26/2000	1400	Surface	17.26	5.26	7.26	53
				1	17.25	5.14	6.95	53
				2	17.21	5.09	6.76	53
				3	17.22	5.02	6.28	52
				4	17.21	4.99	6.26	52
				5	17.21	4.96	6.23	52
				6	17.21	4.94	6.22	52
				7	17.21	4.93	6.22	52
				8	17.21	4.92	6.21	52
				9	17.21	4.91	6.22	52
				10	17.21	4.91	6.21	52
T-1	Horse Creek	07/26/2000	1250	0.5	25.92	7.22	6.74	27
				1	25.75	7.02	6.29	27
				1.5	25.76	7.01	6.21	27
				2	25.76	7.01	6.19	27
				2.5	25.75	7.01	6.19	27
				3	25.75	7.01	6.18	27
				3.5	25.75	7.01	6.17	27
				4	25.75	7.00	6.16	27
				5	25.76	7.00	6.15	27
				6	25.76	6.99	6.15	27
				7	25.76	6.99	6.15	27
				8	25.76	6.99	6.15	27

Table 4. *In situ* ... Cont.

Station ID	Location	Date Sampled	Time	Depth (Ft)	Temp. °C	DO (mg/L)	pH	Conductivity (uS/cm)
M-1	SR below Horse Creek	07/26/2000	1410	0.5	21.60	7.86	7.20	52
				1	20.99	7.68	6.92	52
				2	20.87	7.65	6.83	52
				3	20.77	7.63	6.77	52
				4	20.73	7.68	6.74	52
				5	20.68	7.61	6.71	52
				6	20.71	7.59	6.70	52
				7	20.68	7.57	6.69	52
				8	20.66	7.58	6.65	52
				9	20.67	7.58	6.63	52
				10	20.65	7.59	6.63	52
				11	20.65	7.59	6.63	53
M-2	SR below Butler Creek	07/27/2000	0955	0.5	22.41	8.81	6.95	93
				1	22.46	8.81	6.88	92
				2	22.40	8.83	6.84	92
				3	22.41	8.82	6.82	92
				4	22.41	8.82	6.82	92
T-2	Butler Creek	07/27/2000	1440	0.5	24.22	8.05	6.73	35
				1	24.22	8.00	6.63	35
				2	24.22	7.97	6.58	35

Table 4. *In situ* ... Cont.

Station ID	Location	Date Sampled	Time	Depth (Ft)	Temp. °C	DO (mg/L)	pH	Conductivity (uS/cm)
T-3	Upper Three Runs	08/02/2000	0845	0.5	22.63	7.29	5.69	34
				1	22.60	7.28	5.62	34
				2	22.60	7.27	5.59	34
				2.5	22.60	7.26	5.59	34
M-3	SR below Upper Three Rivers	08/02/2000	0950	0.5	24.85	7.27	6.91	118
				1	24.83	7.16	6.91	119
				2	24.83	7.13	6.91	119
				3	24.82	7.11	6.90	119
				4	24.83	7.08	6.90	119
				5	24.83	7.07	6.90	119
				6	24.83	7.05	6.89	119
				7	24.83	7.04	6.88	119
				8	24.83	7.02	6.87	119
T-4	Lower Three Runs	08/02/2000	1250	0.5	23.42	7.50	7.31	95
				1	23.41	7.48	7.27	95
				2	23.41	7.46	7.26	95
				3	23.41	7.47	7.23	95
				4	23.41	7.46	7.23	95

Table 4. *In situ* ... Cont.

Station ID	Location	Date Sampled	Time	Depth (Ft)	Temp. °C	DO (mg/L)	pH	Conductivity (uS/cm)
M-4	SR below Lower Three Runs	08/02/2000	1400	0.5	26.08	6.95	7.11	121
				1	26.08	6.93	7.08	121
				2	26.08	6.92	7.05	120
				3	26.07	6.90	7.02	120
				4	26.07	6.89	7.01	120
				5	26.07	6.89	7.01	121
T-5	Brier Creek	08/01/2000	1500	0.5	27.29	7.03	7.28	173
				1	27.29	6.99	7.25	173
				2	27.28	6.90	7.18	173
				3	27.28	6.89	7.18	170
M-5	SR below Brier Creek	08/01/2000	1630	0.5	28.00	6.93	7.23	143
				1	28.00	6.89	7.18	143
				2	28.00	6.87	7.17	143
				3	28.00	6.86	7.15	143
				4	28.00	6.86	7.15	143
				5	28.00	6.85	7.15	144
M-6	SR near Cloyo, GA	08/03/2000	0835	1	27.40	6.79	7.15	125
				2	27.40	6.78	7.15	125
				3	27.40	6.75	7.13	125
				4	27.40	6.74	7.13	125
				5	27.40	6.69	7.15	125
				6	27.40	6.69	7.15	125

Table 4. *In situ* ... Cont.

Station ID	Location	Date Sampled	Time	Depth (Ft)	Temp. °C	DO (mg/L)	pH	Conductivity (uS/cm)
T-6	Ebenezer Creek	08/02/2000	1010	1	27.46	2.48	5.82	77.2
				2	27.26	2.09	5.78	77.3
				3	27.25	2.04	5.74	77.2
				4	27.22	1.98	5.73	77.2
				5	27.21	1.91	5.72	77.3
				6	27.21	1.85	5.71	77.3
				7	27.21	1.85	5.70	77.2
				8	27.19	1.81	5.70	77.3
				9	27.17	1.70	5.69	77.3
				10	27.16	1.70	5.69	77.4
				11	27.14	1.67	5.69	77.4
				12	27.11	1.50	5.69	77.5
				13	27.03	0.70	5.68	78.2

Table 4. *In situ* ... Cont.

Station ID	Location	Date Sampled	Time	Depth (Ft)	Temp. °C	DO (mg/L)	pH	Conductivity (uS/cm)
M-7	SR below Ebenezer Creek	08/03/2000	1120	1	27.77	6.92	7.20	125.4
				2	27.77	6.90	7.18	125.3
				3	27.77	6.86	7.20	125.3
				4	27.77	6.84	7.20	125.3
				5	27.77	6.82	7.19	125.3
				6	27.77	6.83	7.17	125.3
				7	27.77	6.82	7.18	125.4
				8	27.77	6.82	7.16	125.3
				9	27.77	6.81	7.16	125.3
				10	27.77	6.80	7.16	125.7
				11	27.77	6.82	7.16	125.9
				12	27.77	6.80	7.16	125.6

Table 4. *In situ* ... Cont.

Station ID	Location	Date Sampled	Time	Depth (Ft)	Temp. °C	DO (mg/L)	pH	Conductivity (uS/cm)
M-8	SR above Point Wentworth	08/02/2000	1420	1	28.92	5.66	6.86	2990
				4	28.89	5.46	6.89	3050
				7	28.86	5.36	6.89	2840
				10	28.85	5.33	6.88	3010
				13	28.85	5.26	6.88	3030
				16	28.85	5.27	6.89	2900
				19	28.84	5.20	6.88	2990
				22	28.85	5.23	6.88	2970
				25	28.85	5.21	6.88	2970
				28	28.85	5.21	6.89	2940
				31	28.85	5.21	6.88	2930
				34	28.85	5.22	6.89	2940
M-8B	SR below Point Wentworth	08/02/2000	1605	1	29.19	5.28	6.96	4200
				3	29.20	5.12	6.96	4010
				5	29.17	5.10	6.96	4050
				7	29.16	5.08	6.95	4110
				9	29.17	5.06	6.95	4000
				11	29.18	5.00	6.94	4120
				13	29.21	4.97	6.95	4040
				15	29.18	4.97	6.94	4130
				17	29.18	4.95	6.95	4080
				19	29.19	4.92	6.93	4110

Table 4. *In situ* ... Cont.

Station ID	Location	Date Sampled	Time	Depth (Ft)	Temp. °C	DO (mg/L)	pH	Conductivity (uS/cm)
RES-1	Lake Hartwell	07/28/2000	1300	1	28.61	7.77	7.37	37.7
				5	28.12	7.84	7.33	38.5
				10	27.96	7.93	7.30	38.5
				15	27.83	7.85	7.31	38.5
				20	27.76	7.83	7.30	38.6
				25	27.71	7.82	7.30	38.5
				30	27.53	7.74	7.25	38.4
				35	23.70	9.09	7.22	37.8
				40	19.24	7.49	6.69	36.7
				45	17.75	8.15	6.52	35.9
				50	16.34	7.22	6.44	36.2
				55	15.50	7.14	6.40	35.9
				60	14.76	6.31	6.32	36.0
				65	14.15	6.21	6.29	36.5
				70	13.66	6.16	6.26	36.8
				75	13.14	6.04	6.24	36.6
				80	12.78	6.00	6.19	36.7
				85	12.23	5.81	6.16	36.6
				90	11.90	5.77	6.16	36.9
				95	11.36	5.62	6.15	37.2
				100	10.90	5.45	6.10	37.3
				105	10.55	5.51	6.07	38.2
				110	10.29	5.51	6.05	38.1
				115	9.95	5.36	6.03	39.0
				120	9.01	5.23	6.00	38.8
				125	9.65	5.14	6.02	39.2
				130	9.51	4.83	5.99	39.6

Station ID	Location	Date Sampled	Time	Depth (Ft)	Temp. °C	DO (mg/L)	pH	Conductivity (uS/cm)
RES-2	Lake Russell	07/28/2000	0950	1	28.18	7.87	7.86	42.0
				5	28.04	7.93	7.79	42.0
				10	27.32	8.07	7.95	42.2
				15	26.94	8.03	7.63	41.8
				20	21.95	8.72	6.78	40.5
				25	18.76	7.30	6.42	39.8
				30	17.19	5.54	6.18	39.4
				35	16.12	4.89	6.06	39.6
				40	15.72	4.44	6.03	40.0
				45	15.32	4.30	6.04	39.6
				50	14.95	4.42	6.05	40.0
				55	14.69	4.79	6.04	40.0
				60	14.54	4.26	6.04	39.8
				65	14.40	4.42	6.04	40.0
				70	14.22	5.84	6.06	40.8
				75	14.07	8.99	6.03	41.6
				80	13.97	8.74	6.03	41.0
				85	13.89	8.24	6.01	41.4
				90	13.76	9.01	6.01	42.4
				95	13.71	9.05	6.04	42.0
				100	13.66	9.06	6.02	42.5
				105	13.60	8.39	6.02	42.1
				110	13.54	7.38	6.04	42.6
				115	13.52	6.91	6.02	42.0
				120	13.49	6.80	6.01	42.0
				125	13.43	6.55	6.01	42.6

Table 4. *In situ* ... Cont.

Station ID	Location	Date Sampled	Time	Depth (Ft)	Temp. °C	DO (mg/L)	pH	Conductivity (uS/cm)
RES-3	Lake Thurmond	07/27/2000	1124	1	28.41	7.96	7.55	53.1
				5	28.24	8.07	7.51	53.0
				10	28.14	7.96	7.50	53.1
				15	28.09	7.90	7.45	53.4
				20	27.91	7.78	7.39	53.0
				25	24.47	6.26	6.45	48.9
				30	21.19	3.10	6.06	45.9
				35	19.48	2.20	5.96	45.0
				40	18.45	1.68	5.92	43.8
				45	17.86	1.60	5.93	44.1
				50	17.41	1.71	5.93	44.1
				55	16.96	1.26	5.94	44.6
				60	16.66	1.83	5.98	45.3
				65	16.44	1.88	5.97	45.3
				70	16.15	1.91	5.99	46.3
				75	15.92	1.98	6.00	47.0
				80	15.72	2.18	6.01	46.5
				85	15.50	2.32	6.03	47.0
				90	15.29	2.38	6.02	46.8
				95	15.02	2.33	6.02	46.8
				100	14.74	2.35	6.02	46.8
				105	14.54	2.46	6.04	47.5
				110	14.44	2.51	6.03	46.5
				115	13.99	2.45	6.04	46.3
				120	13.74	2.46	6.03	46.5

Table 5 . Fish collected for the Savannah River Mercury TMDL Project, July 27 - September 19, 2000 with analytical results.

Station #	Fish #	Species	Total Length (mm)	Whole Wt (gm)	Filet Wt (gm)	A THg, DW (mg/Kg)	B Dry Wt. (%)	C AXB/100 THg, WW (mg/Kg)
M-0	1	LMB Lab Dup.	510	1723	599	1.76 1.93	20.4 20.4	0.360 0.395
M-0	2	LMB	337	515	189	0.646	19.3	0.124
M-0	3	LMB	328	526	194	1.17	22.1	0.258
M-0	4	LMB	305	350	128	0.790	19.4	0.153
M-0	5	LMB	319	428	166	1.53	21.1	0.323
M-1	1	LMB	329	510	168	0.432	22.1	0.095
M-1	2	LMB	DISQUALIFIED*					
M-1	3	LMB	261	259	110	0.337	21.2	0.071
M-1	4	LMB	255	213	89	0.401	21.1	0.084
M-1	5	LMB	218	148	57	0.223	20.2	0.045
T-1	1	LMB	340	556	184	0.563	21.9	0.123
T-1	2	LMB	331	544	207	1.34	21.6	0.290
T-1	3	LMB	310	393	156	0.641	21.6	0.138
T-1	4	LMB	270	254	97	1.32	22.3	0.295
T-1	5	LMB	316	425	181	2.54	18.7	0.475
M-2	1	LMB	460	1423	576	1.87	27.8	0.521
M-2	2	LMB	DISQUALIFIED*					
M-2	3	LMB	288	278	115	2.37	24.9	0.590
M-2	4	LMB	282	360	179	0.366	27.3	0.100
M-2	5	LMB Lab Dup.	275	267	124	0.466 0.489	25.7 25.7	0.120 0.126
T-2	1	LMB	257	204	73	0.881	20.9	0.185
T-2	2	GR PICK	219	77	30	2.29	19.6	0.448
T-2	3	GR PICK	170	35	13	1.79	18.5	0.331
T-2	4	GR PICK	220	82	29	1.33	19.1	0.245
T-2	5	LMB	232	174	70	1.49	20.7	0.309

Table 5 . Fish collected ... Cont.

Station #	Fish #	Species	Total Length (mm)	Whole Wt (gm)	Filet Wt (gm)	A THg, DW (mg/Kg)	B Dry Wt (%)	C AXB/100 THg, WW (mg/Kg)
M-3	1	LMB	322	414	148	0.599	26.2	0.157
M-3	2	LMB	340	469	178	0.839	26.5	0.223
M-3	3	LMB	280	264	101	0.384	24.4	0.0936
M-3	4	LMB	304	354	130	1.07	25.9	0.277
M-3	5	LMB	284	279	95	0.596	26.3	0.157
T-3	1	BOW	585	1913	761	3.62	28.7	1.04
T-3	2	BOW	589	1784	578	2.29	28.2	0.645
T-3	3	BOW	567	1692	560	1.99	27.0	0.537
T-3	4	BOW	603	1775	604	4.64	25.7	1.19
T-3	5	BOW	505	1214	494	1.84	27.4	0.504
M-4	1	LMB	302	345	131	0.419	24.3	0.102
M-4	2	LMB	401	864	279	1.31	25.9	0.339
M-4	3	LMB	294	320	120	0.589	25.9	0.153
M-4	4	LMB Lab Dup.	355	640	234	0.897 0.884	24.8 24.8	0.223 0.219
M-4	5	LMB	273	258	100	0.328	25.7	0.0843
T-4	1	BOW	624	2328	848	4.72	28.8	1.36
T-4	2	BOW	570	1643	604	4.39	25.9	1.14
T-4	3	BOW	509	1113	425	2.89	26.4	0.763
T-4	4	BOW	588	1535	554	4.71	25.9	1.22
T-4	5	BOW	540	1368	444	3.78	25.1	0.949
M-5	1	LMB	355	467	221	4.24	24.5	1.04
M-5	2	LMB	280	253	126	1.18	27.8	0.327
M-5	3	LMB	305	291	129	1.36	25.0	0.340
M-5	4	LMB	260	218	106	0.513	26.7	0.137
M-5	5	LMB	255	186	92	0.899	25.7	0.231

Table 5. Fish collected ... Cont.

Station #	Fish #	Species	Total Length (mm)	Whole Wt (gm)	Filet Wt (gm)	A THg, DW (mg/Kg)	B Dry Wt (%)	C AXB/100 THg, WW (mg/Kg)
T-5	1	LMB	290	268	125	2.24	21.3	0.478
T-5	2	LMB	263	213	92	3.75	20.7	0.777
T-5	3	LMB	255	213	97	3.44	20.5	0.706
T-5	4	LMB	235	166	81	1.09	21.3	0.232
T-5	5	LMB	214	112	54	1.41	19.3	0.271
M-6	1	LMB	477	1809	575	5.54	25.9	1.44
M-6	2	LMB	301	377	138	1.38	26.1	0.361
M-6	3	LMB	310	324	129	1.92	26.7	0.513
M-6	4	LMB	295	295	119	1.78	28.1	0.501
M-6	5	LMB	295	315	119	1.40	25.4	0.356
T-6	1	BOW	654	1053	418	3.94	25.8	1.02
T-6	2	BOW	545	1045	401	9.00	24.1	2.17
T-6	3	CH PICK	415	446	198	5.20	24.1	1.25
T-6	4	CH PICK Lab Dup.	365	267	118	3.34 3.27	25.0 25.0	0.836 0.818
T-6	5	LMB	285	292	123	4.22	25.7	1.08
M-7	1	LMB	325	414	173	1.20	20.5	0.246
M-7	2	LMB	272	256	108	1.98	20.8	0.413
M-7	3	LMB	275	233	103	1.99	20.2	0.401
M-7	4	LMB	465	1364	530	5.29	20.2	1.070
M-7	5	LMB	500	1793	637	5.76	20.7	1.193

Table 5 . Fish collected ... Cont.

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Station #	Fish #	Species	Total Length (mm)	Whole Wt (gm)	Filet Wt (gm)	A THg, DW (mg/Kg)	B Dry Wt (%)	C AXB/100 THg. WW (mg/Kg)
M-8	1	BOW	570	1799	729	0.879	21.5	0.189
M-8 M-8	2 2D	BOW Dup. Lab Dup.	570	1793	742	2.89 2.79 2.77	23.7 24.3 24.3	0.684 0.677 0.672
M-8	3	BOW	572	1791	646	4.23	23.0	0.973
M-8	4	LMB	260	216	87	0.875	21.2	0.186
M-8	5	LMB Lab Dup.	280	278	113	0.960 0.952	21.9 21.9	0.210 0.208
M-8	6	LMB	25	189	76	0.914	21.5	0.197
M-8B	1	STB	490	1353	525	1.51	22.2	0.335
M-8B M-8B	2 2D	STB Dup.	530	1685	645	1.67 1.73	20.7 20.2	0.345 0.349
M-8B	3	STB	540	1789	658	1.65	20.4	0.337
M-8B M-8B	4 4D	STB Dup.	540	1494	514	1.99 2.03	19.4 19.4	0.385 0.394
M-8B	5	STB	505	1408	556	2.48	21.9	0.542

LMB = Largemouth Bass; BOW = Bowfin; CH PICK = Chain Pickerel; STB = Striped Bass;
GR PICK = Grass Pickerel; THg = Total Mercury; DW = Dry Weight; WW = Wet Weight.

* = These samples both labeled M2-2.

Table 6. Sulfide Results for Water and Sediment (Pore Water) Samples Collected for the Savannah River Mercury TMDL Study, July - August 2000.

SAMPLE ID	MEASUREMENT (mg/L S ²⁻)	QC	DATE & TIME
BLANK	0.010 U		2000/08/07 20:16:16
CV	0.505	99.4 %R	2000/08/07 20:29:47
SRM	0.453	87.8 %R	2000/08/07 20:33:23
MAIN-0-SW	0.013		2000/08/07 20:37:02
MAIN-0-SW DUP	0.011	16.7 %RPD	2000/08/07 20:40:49
MAIN-0-PW	0.256		2000/08/07 20:56:49
MAIN-3-SW	0.018		2000/08/07 20:57:55
MAIN-3-SW SPIKE	0.185	64.7 %MSR	2000/08/07 20:59:44
MAIN-3-PW	0.575		2000/08/07 21:00:36
TRIB-3-SW	0.034		2000/08/07 21:04:09
TRIB-3-PW	0.132		2000/08/07 21:07:15
BLANK	0.010 U		2000/08/07 21:28:41
CV	0.507	99.8 %R	2000/08/07 21:29:33
MAIN-4-SW	0.014		2000/08/07 21:30:21
MAIN-4-SW DUP	0.018	25.0 %RPD	2000/08/07 21:31:11
MAIN-4-PW	0.126		2000/08/07 21:52:05
TRIB-4-SW	0.013		2000/08/07 21:52:35
TRIB-4-SW SPIKE	0.201	72.9 %MSR	2000/08/07 21:53:22
TRIB-4-PW	0.535		2000/08/07 21:55:23
MAIN-5-SW	0.015		2000/08/07 21:56:11
MAIN-5-PW	0.902		2000/08/07 21:57:05
TRIB-5-SW	0.013		2000/08/07 21:59:55
BLANK	0.010 U		2000/08/07 22:43:43
CV	0.510	100.4 %R	2000/08/07 22:44:58
TRIB-5-PW	0.414		2000/08/07 22:45:27
TRIB-5-SWD	0.014		2000/08/07 22:46:22
TRIB-5-SWD DUP	0.011	24.0 %RPD	2000/08/07 22:47:12
MAIN-5-PWD	0.216		2000/08/07 22:47:42
MAIN-6-SW	0.027		2000/08/07 22:48:28
MAIN-6-SW SPIKE	0.228	77.9 %MSR	2000/08/07 22:55:34
MAIN-6-PW	0.053		2000/08/07 22:56:07
TRIB-6-SW	0.010 U		2000/08/07 22:56:43
TRIB-6-PW	0.785		2000/08/07 22:57:33
BLANK	0.010 U		2000/08/07 23:23:53
CV	0.504	99.2 %R	2000/08/07 23:24:53
MAIN-7-SW	0.018		2000/08/07 23:25:26
MAIN-7-SW DUP	0.019	5.4 %RPD	2000/08/07 23:25:56
MAIN-7-PW	0.053		2000/08/07 23:27:00
MAIN-8-SW	0.037		2000/08/07 23:27:35
MAIN-8-SW SPIKE	0.167	50.4 %MSR	2000/08/07 23:34:16
MAIN-8-PW	0.408		2000/08/07 23:34:52
MAIN-8B-SW	0.023		2000/08/07 23:35:45
MAIN-8B-PW	0.068		2000/08/07 23:36:53
BLANK	0.010 U		2000/08/07 23:37:55
CV	0.502	98.8 %R	2000/08/07 23:38:30

Table 6. (Continued)

SAMPLE ID	MEASUREMENT (mg/L S ²)	QC	DATE & TIME
BLANK	0.010 U		2000/08/01 16:03:07
CV	0.511	83.4 %R	2000/08/01 16:16:50
SRM	0.446	69.1 %R	2000/08/01 16:27:38
MAIN-1-SW O	0.010 U		2000/08/01 16:34:06
MAIN-1-SW D	0.010 U	0.0 %RPD	2000/08/01 16:39:59
TRIB-1-PW	0.063		2000/08/01 16:47:20
RES-2-SWD	0.022		2000/08/01 16:53:43
RES-2-SWD SPIKE	0.182	62.0 %MSR	2000/08/01 17:00:20
RES-1-SW	0.010 U		2000/08/01 17:09:13
TRIB-1-SW	0.010 U		2000/08/01 17:17:51
MAIN-1-PW	0.410		2000/08/01 17:25:58
RES-2-SW	0.010 U		2000/08/01 17:32:26
BLANK	0.010 U		2000/08/01 17:38:05
CV	0.507	82.7 %R	2000/08/01 17:43:43
RES-3-SW O	0.010 U		2000/08/01 17:48:34
RES-3-SW D	0.010 U	0.0 %RPD	2000/08/01 17:53:13
TRIB-2-SW	0.017		2000/08/01 17:57:30
TRIB-2-SW SPIKE	0.183	64.3 %MSR	2000/08/01 18:02:09
MAIN-2-SW	0.010 U		2000/08/01 18:10:40
MAIN-2D-PW	0.141		2000/08/01 18:14:44
MAIN-2-PW	0.105		2000/08/01 18:19:24
TRIB-2-PW	0.036		2000/08/01 18:25:17
MAIN-2D-SW	0.010 U		2000/08/01 18:27:54
BLANK	0.010 U		2000/08/01 18:30:13
CV	0.492	80.3 %R	2000/08/01 18:34:07

BLANK - lab blank

CV - calibration verification

SRM - standard reference material

MSR - matrix spike recovery

RPD - relative percent difference

%R - percent recovery

MAIN - mainstream Savannah River

TRIB - savannah river tributary

SW - surface water sample

PW - pore water (sediment extract)

U - not detected. Number is the minimum detection limit.

Table 7. Results for nutrient and classical analytes for sediment and soil samples collected for the Savannah River Mercury TMDL Study, July - September 2000.

Sample Stations	Sample ID (Field)	Sample ID (Lab)	Moisture (%)	VS (%)	N (mg/kg)	SO4 (mg/kg)	TKN (mg/kg)	TP (mg/kg)
Reservoirs								
Hartwell	R1SD	9795	79	18	59 U	260	2200	550
	R1SF	9796	6	6	13 U	34 A	380 A	93
Russell	R2SD	9793	84	14	77 U	270	3300	720
	R2SF	9794	14	8.4	14 UJ	18	1000	87
Thurmond	R3SD	9791	52	5	26 U	140	940	250
	R3SF	9792	7.3	15	13 U	18	1900	100
Savannah River								
Thurmond tailwater								
	M0SD	10379	22	0.6	16 U	9.5 U	86	96
	M0SF	10378	34	20	33	25	7300	280
Savannah R. stations	M1SD	9782	24	0.52	16 U	9.8 U	150	67
	M1SF	9784	25	16 A	69	83	4100	510
M2 SD duplicate	M2DSD	9786	20	0.26	16 U	9.6 U	41	62
M2 SF duplicate	M2DSF	9787	22	10	60	43	2800	470
	M2SD	9785	14	0.19	14 U	9.3 U	130	82
	M2SF	9788	22 A	10 A	63	51 A	2600 A	460
	M3SD	10373	25 A	0.27 AJ	18 U	10 U	50	82
	M3SF	10382	21	3.9	16 U	11 U	940 AJ	240 A
	M4SD	10375	23	0.23	16 U	9.7 U	36	81
	M4SF	10370	18	2.8	17 U	11 U	610	200 AJ
	M5SD	10371	23	0.7	16 U	12 U	47	82
	M5SF	10368	17	5.2	15 U	14	2600	220
	M6SD	9919	20	0.2	15 U	9.7 U	41	86
	M6SF	9920	10	5.2	14 U	17	1200	280
	M7SD	9923	29	0.68	19 U	39	180	160
	M7SF	9924	23	6.9 A	17 U	10	2500	160
	M8BSD	9916	44	5.9	23 U	360	750	450
	M8SD	9917	22	0.16	16 U	19	26	130
	M8SF	9918	6.6	3	13 U	11 A	970 A	250
Tributaries								
Horse Creek								
	T1SD	9781	26	0.64	17 UJ	10 U	61	56
	T1SF	9783	18	6.3	15 U	13	1300	410 A
Butler Creek								
	T2SD	9790	23	0.21	16 U	9.5 U	57	44
	T2SF	9789	3.9	7.1	13 U	12	1800	220 AJ
Upper 3 Runs								
	T3SD	10381	22 A	0.29 A	17 U	9.4 U	72	23
	T3SF	10376	18	7.8	15 U	26	2700	160
Lower 3 Runs								
	T4SD	10383	26	0.72	17 U	12 U	130	120
	T4SF	10377	35	16	20 U	61	5000	580
Brier Creek								
	T5SD	10372	25	0.16	17 U	10 U	49	42
T5 SD duplicate	T5SDD	10380	24	0.15	18 U	11 U	59	34
	T5SF	10369	17	4.4	16 U	14 A	740 A	200
T5 SF duplicate	T5SFD	10374	16	4.6	15 U	7.7 U	1100	190
Ebenezer Creek								
	T6SD	9921	82	23	75 U	94	5900	660
	T6SF	9922	9.5	3.9	14 U	14	960	33

VS - volatile solids

N - nitrate-nitrite nitrogen

SO4 - sulfate

TKN - total Kjeldahl nitrogen

TP - total phosphorous

SD - sediment sample

SF - soil sample

SDD, SFD - duplicate sediment or soil sample

Data Qualifiers:

A-Average value. J-Estimated value.

U-Material was analyzed for but not detected. The number is the minimum quantitation limit.

Table 8. Results of nutrient and classical analyte analyses for ambient water samples collected for the Savannah River Mercury TMDL Study, July - September 2000.

Sample Stations	Sample ID (Field)	Sample ID (Lab)	TKN (mg/l)	TP (ug/l)	TSS (mg/l)	Sample ID (Lab)	SULFATE (mg/l)	TOC (mg/l)
RESERVOIRS								
Hartwell	R1SW	9980	0.21	10 U	5 U	9970	1 U	1.2
Russell	R2SW	9981	0.24	10 U	5 U	9971	2.5	1.5
R2 duplicate	R2SWD	9982	0.29	30	5 U	9972	2.1	1.5
Thurmond	R3SW	9983	0.21	10 U	5 U	9973	1.9	1.8
SAVANNAH RIVER								
Thurmond tailwater	MOSW	11720	0.22	10 U	5 U	13196	6.4	1.8
Savannah R. stations	M1SW	9975	0.51	40	13	9966	2.6	2.2
	M2SW	9976	0.36	300	5 U	9968	8.1	2.7
M2 duplicate	M2DSW	9977	0.35	300	5 U	9969	8.3	2.7
	M3SW	11723	0.39	150	10	13204	13	3.5
	M4SW	11725	0.36	130	12	13203	14	3.1
	M5SW	11727	0.42	110	10	13198	18	3.1
	M6SW	9937	0.36	120	16	9960	18	2.9
	M7SW	9939	0.4	130	18	9962	18	3.2
	M8BSW	9940	0.55	110	35	9963	120	2.4
	M8SW	9941	0.5	120	34	9964	100	2.8
TRIBUTARIES								
Horse Creek	T1SW	9974	0.28	10 U	5 U	9965	1.9	3.4
Butler Creek	T2SW	9978	0.3	50	5 U	9967	3	3.3
Upper Three Runs	T3SW	11724	0.59	150	27	13199	9.1	4.7
Lower Three Runs	T4SW	11721	0.32	40	12	13202	2.6	3.4
Brier Creek	T5SW	11722	0.35	100	9	13201	27	3.4
	T5SW	11726	0.35	100	9	13200	29	3.3
Ebenezer Creek	T6SW	9938	0.78	60	5 U	9961	8.7	16

Lab ID - Number assigned by the EPA-R4-SESD-EIB laboratory. TKN, TP and TSS were analyzed by one contract laboratory; sulfate and TOC were analyzed by a second contract laboratory. EIB assigned discrete laboratory sample IDs for work conducted by each.

TKN - total Kjeldahl nitrogen

TP - total phosphorous

TSS - total suspended solids

TOC - total organic carbon

Data Qualifiers:

U-Material was analyzed for but not detected. The number is the minimum quantitation limit.

Table 9. Results of methyl mercury and total mercury analyses for ambient water samples collected for the Savannah River Mercury TMDL Study, July - September 2000.

Sample Stations	Sample ID (Field)	Sample ID (Lab)	MeHg (ng/L)	Total Hg (ug/L)
Reservoirs				
Hartwell	R1	10003	0.057 UJ	0.004 U
	R1FB	10005	0.025 UJ	0.000 U
Russell	R1TB	10004	0.055 UJ	0.000 U
	R2	10006	0.064 UJ	0.000 U
Thurmond	R2D	10007	0.052 UJ	0.001 U
	R3F	10009	0.07 UJ	0.001 U
	R3U	10008	0.075 UJ	0.001 U
Savannah River				
Thurmond tailwater	M0TB	13161	0.027 UJ	0.000 U
	M0FB	13162	0.021 UJ	0.000 U
Mainstem	M0	13163	0.021 UJ	0.000 U
	M1	9987	0.096 UJ	0.001 U
	M1FB	9985	0.059 UJ	0.000 U
	M1TB	9984	0.026 UJ	0.000 U
	M2DFB	9993	0.17 J	0.000 U
	M2D	9992	0.047 UJ	0.001
	M2	9994	0.16 J	0.001
	M2TB	9996	0.17 J	0.000 U
	M3	13171	0.066 UJ	0.003
	M4U	13168	0.057 UJ	0.01
	M4F	13170	0.065 UJ	0.002
	M5	13167	0.088 UJ	0.003
	M5TB	13164	0.035 UJ	0.000 U
	M6	9949	0.087 UJ	0.003
	M6FB	9951	0.021 UJ	0.000 U
	M6TB	9952	0.021 UJ	0.001 U
	M7	9957	0.076 UJ	0.003
	M8F	9945	0.032 UJ	0.001
	M8U	9944	0.093 UJ	0.004
	M8FB	9946	0.023 UJ	0.000 U
	M8B	9942	0.062 UJ	0.004
Tributaries				
Horse Creek	T1	9986	0.24 J	0.006
Butler Creek	T2	9995	0.31 J	0.002
Upper Three Runs	T3	13173	0.17 J	0.006
	T3FB	13166	0.23 UJ	0.000 U
Lower Three Runs	T4	13165	0.13 J	0.002
Brier Creek	T5	13169	0.11 UJ	0.002
	T5D	13172	0.081 UJ	0.002
Ebenezer Creek	T6	9954	0.65 J	0.003

Data Qualifiers:

J-Estimated value.

U-Material was analyzed for but not detected. The number is the minimum quantitation limit.

Sample Field ID Codes:

R - reservoir; M - mainstem Savannah River; T - tributary; B - station M8B

FB - field blank; TB - trip blank; D - duplicate sample; F - filtered; U - unfiltered

Other:

MeHg - monomethyl mercury as mercury

Table 10. Results of methyl mercury and total mercury analyses for sediment and soil samples collected for the Savannah River Mercury TMDL Study, July - August 2000.

Sample Stations	Sample ID (Field)	Sample (Lab)	MeHg (ug/kg)	Total Hg (mg/kg)
Reservoirs				
Hartwell	R1SD	13187	0.11 U	0.013 U
	R1SF	13188	0.6	0.037 U
Russell	R2SD	13185	0.25	0.023 U
	R2SF	13186	0.12 U	0.066 U
Thurmond	R3SD	13183	0.11 U	0.019 U
	R3SF	13184	0.078 U	0.079 U
Savannah River				
Thurmond tailwater	M0SD	13159	0.003 U	0.003 U
	M0SF	13160	2	0.067 U
Mainstem	M1SD	9988	0.017 U	0.003 U
	M1SF	9989	0.042 U	0.079 U
	M2DSD	10001	0.004 U	0.006 U
	M2DSF	10002	0.065 U	0.041 U
	M2SD	10000	0.003 U	0.01 U
	M2SF	9999	0.054 U	0.13 U
	M3SD	13178	0.002 U	0.003 U
	M3SF	13174	0.031 U	0.033 U
	M4SD	13156	0.01 U	0.003 U
	M4SF	13157	0.052 U	0.023 U
	M5SD	13182	0.002 U	0.003 U
	M5SF	13179	0.002 U	0.057 U
	M6SD	9950	0.011 U	0.01 U
	M6SF	9953	0.26	0.044 U
	M7SD	9958	0.12 U	0.003 U
	M7SF	9959	0.95	0.072 U
	M8SD	9947	0.002 U	0.003 U
	M8SF	9948	0.011 U	0.034 U
	M8BSD	9943	0.56	0.083 U
Tributaries				
Horse Creek	T1SD	9990	0.029 U	0.02 U
	T1SF	9991	0.063 U	0.044 U
Butler Creek	T2SD	9998	0.016 U	0.014 U
	T2SF	9997	0.063 U	0.044 U
Upper Three Runs	T3SD	13176	0.002 U	0.003 U
	T3SF	13181	0.013 U	0.056 U
Lower Three Runs	T4SD	13155	0.002 U	0.013 U
	T4SF	13158	0.54	0.14 U
Brier Creek	T5SD	13180	0.002 U	0.003 U
	T5SDD	13154	0.003 U	0.003 U
	T5SF	13175	0.32	0.026 U
	T5SFD	13177	0.44	0.034 U
Ebenezer Creek	T6SD	9955	0.34	0.14
	T6SF	9956	0.11 U	0.028 U

Data Qualifiers:

U-Material was analyzed for but not detected. The number is the minimum quantitation limit.

Sample (Field) ID Codes:

R - reservoir; M - mainstem Savannah River; T - tributary; B - station M8B

SD - surface sediment sample; SF - surface soil sample

D (not preceded by S) - field duplicate sample

Other:

MeHg - monomethyl mercury as mercury