DOE EA - 0496

FINAL

SURFACE WATER INTERIM MEASURES/ INTERIM REMEDIAL ACTION PLAN/ ENVIRONMENTAL ASSESSMENT AND DECISION DOCUMENT

SOUTH WALNUT CREEK BASIN

OPERABLE UNIT NO. 2

U.S. DEPARTMENT OF ENERGY

Rocky Flats Plant
Golden, Colorado

ENVIRONMENTAL RESTORATION PROGRAM

8 March 1991

Volume II - Appendices

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SOUTH WALNUT CREEK BASIN
OPERABLE UNIT NO. 2

VOLUME I

U.S. Department of Energy
Rocky Flats Plant
Golden, Colorado

8 MARCH 1991

FINAL

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REVIEWED FOR CLASSIFICATION/UCNI
By F. J. Curran
Date 3-22-91

APPENDIX A

DATA TABLES

OPERABLE UNIT NO. 2

TABLE A-1

BACKGROUND GROUND-WATER (SECOND QUARTER 1989)
TOLERANCE INTERVAL UPPER LIMITS
OR MAXIMUM DETECTED VALUE

Analyte	Units	Rocky Flats Alluvium (11 Samples)	Colluvium (2 Samples)	Valley Fill Alluvium (8 Samples)	Weathered Claystone (4 Samples)	Weathered Sandstone (2 Samples)	Unweathered Sandstone (7 Samples)
Dissolved Metals							
Aluminum	mg/l	ND	ND	ND	ND	ND	0.327*
Antimony	mg/l	ND	ND	ND	ND	ND	ND
Arsenic	mg/l	ND	ND	ND	ND	ND	0.0186*
Barium	mg/l	ND	ND	ND	ND	ND	ND
Beryllium	mg/l	ND	ND	ND	ND	ND	ND
Cadmium	mg/l	ND	ND	ND	ND	ND	ND
Calcium	mg/l	85	76.8*	138	73.4*	65.7*	64.6
Cesium	mg/l	ND	ND	ND	ND	ND	ND
Chromium	mg/l	ND	ND	ND	ND	0.0122*	ND
Cobalt	mg/l	ND	ND	ND	ND	ND	ND
Copper	mg/l	ND	ND	ND	ND	ND	ND
Iron	mg/l	0.266*	ND	0.94*	ND	ND	ND
Lead	mg/l	ND	ND	ND	ND	ND	ND
Lithium	mg/l	ND	0.172*	0.028	.031*	0.0106*	ND
Magnesium	mg/l	5.79*	15.3*	26.57	45.3*	9.41*	ND
Manganese	mg/l	0.365	0.088*	0.686*	0.126*	0.292*	0.0182*
Mercury	mg/l	ND	ND	0.003*	.008*	ND	ND
Molybdenum	mg/l	0.0136*	ND	ND	0.015*	0.015*	0.112*
Nickel	mg/l	0.0432*	ND	ND	ND	ND	ND
Potassium	mg/l	7.73*	ND	ND	ND	ND	21.89*
Selenium	mg/l	ND	ND	0.0114*	ND	ND	0.041*
Silver	mg/l	ND	ND	ND	ND	ND	ND
Sodium	mg/l	13.4	98.7*	88	36.9*	25.6*	599
Strontium	mg/l	0.159*	ND	ND	ND	ND	0.451*
Thallium	mg/l	ND	ND	ND	0.01*	ND	ND
Tin	mg/l	ND	ND	ND	ND	ND	
Vanadium	mg/l	ND	ND	ND	ND	ND	ND
Zinc	mg/l	0.141*	ND	0.0212*	0.107*	ND	0.564

TABLE A-1 (cont.)

BACKGROUND GROUND-WATER (SECOND QUARTER 1989)
TOLERANCE INTERVAL UPPER LIMITS
OR MAXIMUM DETECTED VALUE

Analyte	Units	Rocky Flats Alluvium (11 Samples)	Colluvium (2 Samples)	Valley Fill Alluvium (8 Samples)	Weathered Claystone (4 Samples)	Weathered Sandstone (2 Samples)	Unweathered Sandstone (7 Samples)
Other							
Total Dissolved Solids	mg/l	352	520*	947	320*	170*	1761
Carbonate	mg/l	ND	ND	ND	ND	ND	49
Bicarbonate	mg/l	436	470*	719	400*	140*	412
Chloride	mg/l	15.6	20*	40.29	11*	15*	607
Sulfate	mg/l	45.1	86*	150	44*	16*	950
Nitrate	mg/l	2.98	0.18*	0.69*	0.58*	1.6*	0.610
Cyanide	mg/l	.0038*	ND	ND	0.0036*	ND	ND
pH	----	8.6 (5.98)	7.4* (7.1)**	8.68 (6.12)	8.2* (7.4)**	7.5* (7.2)**	10.57 (7.43)
Dissolved Radionuclides							
Gross Alpha	pCi/l	12.543	27*	13.515	12*	7*	13*
Gross Beta	pCi/l	14.570	12*	18.530	7*	2*	15*
Uranium 233, 234	pCi/l	1.647	11*	6.481	5.8*	1.1*	12.936
Uranium 235	pCi/l	0.000	0.3*	0.232	0.2*	0*	0.135
Uranium 238	pCi/l	0.195	7.7*	5.084	3.2	0.6*	3.3507
Strontium 89, 90	pCi/l	0.552	0.1*	0.878	0.1	-0.1*	0.2*
Plutonium 239, 240	pCi/l	0.009	0*	0.012	0.03	0.01*	0.000
Americium 241	pCi/l	0.000	0*	0.012	0	0.01*	0.019
Cesium 137	pCi/l	0.603	0.2*	0.776	0.4	0.3*	0.7*
Tritium	pCi/l	309	100*	505	100	100*	731

* - Maximum Detected Value
** - Minimum Detected Value
ND - Not Detected at Contract Required Detection Limit
() - Tolerance Internal Lower Limit for Two-Sided Parameter

TABLE A-2

BACKGROUND SURFACE WATER (SECOND QUARTER 1989)
TOLERANCE INTERVAL UPPER LIMITS
OR MAXIMUM DETECTED VALUE

Analyte	Units	Round 1 (7 samples)** Total	Dissolved
Metals			
Aluminum	mg/l	0.916*	0.485*
Antimony	mg/l	ND	ND
Arsenic	mg/l	ND	ND
Barium	mg/l	ND	ND
Beryllium	mg/l	ND	ND
Cadmium	mg/l	ND	ND
Calcium	mg/l	85.01	85.92
Cesium	mg/l	1.00*	ND
Chromium	mg/l	ND	ND
Cobalt	mg/l	ND	ND
Copper	mg/l	ND	ND
Iron	mg/l	3.17	1.78*
Lead	mg/l	ND	0.006*
Lithium	mg/l	ND	ND
Magnesium	mg/l	12.48	12.82
Manganese	mg/l	0.636	0.368*
Mercury	mg/l	0.001	0.001
Molybdenum	mg/l	ND	ND
Nickel	mg/l	ND	ND
Potassium	mg/l	ND	ND
Selenium	mg/l	ND	ND
Silver	mg/l	0.001*	ND
Sodium	mg/l	47.36	46.22
Strontium	mg/l	0.382	0.40
Thallium	mg/l	ND	ND
Tin	mg/l	ND	ND
Vanadium	mg/l	ND	ND
Zinc	mg/l	0.027	0.032*

TABLE A-2 (cont.)

BACKGROUND SURFACE WATER (SECOND QUARTER 1989)
TOLERANCE INTERVAL UPPER LIMITS
OR MAXIMUM DETECTED VALUE

Analyte	Units	Round 1 (7 samples)** Total	Dissolved
Other			
Total Dissolved Solids	mg/l	271.16	NA
Carbonate	mg/l	ND	NA
Bicarbonate	mg/l	296.97	NA
Chloride	mg/l	106.9	NA
Sulfate	mg/l	48.82	NA
Nitrate	mg/l	2.69	NA
Cyanide	mg/l	ND	NA
pH	----	8.69 (6.60)	NA
Radionuclides			
Gross Alpha	pCi/l	7.74	4.38
Gross Beta	pCi/l	9.89	8.80
Uranium 233, 234	pCi/l	1.45	1.40
Uranium 235	pCi/l	0.133	0.133
Uranium 238	pCi/l	0.803	0.957
Strontium 89, 90	pCi/l	2.04	1.398
Plutonium 239, 240	pCi/l	0.018	ND
Americium 241	pCi/l	0.042	0.013
Cesium 137	pCi/l	0.599	0.472
Tritium	pCi/l	258	NA

NA - Not Analyzed
ND - Not Detected
() - Tolerance Interval Lower Limit for Two-Sided Parameter
* - Maximum Detected Value
** - At Stations SW-104 and SW-80, most total and a few dissolved constituents were uncharacteristically high relative to the other data. To be conservative, these data are not included in computation of the tolerance interval.

TABLE A-3

BACKGROUND SEDIMENT
TOLERANCE INTERVAL UPPER LIMITS
OR MAXIMUM DETECTED VALUE

FEBRUARY 1989

Analyte	Units	Upper Limit (9 Samples)
Total Metals		
Aluminum	mg/kg	24789
Antimony	mg/kg	ND
Arsenic	mg/kg	13.0*
Barium	mg/kg	182*
Beryllium	mg/kg	ND
Cadmium	mg/kg	ND
Calcium	mg/kg	72551
Cesium	mg/kg	ND
Chromium	mg/kg	43.38
Cobalt	mg/kg	ND
Copper	mg/kg	22.0*
Iron	mg/kg	28308
Lead	mg/kg	39.502
Lithium	mg/kg	ND
Magnesium	mg/kg	4110*
Manganese	mg/kg	372.20
Mercury	mg/kg	ND
Molybdenum	mg/kg	ND
Nickel	mg/kg	29.9*
Potassium	mg/kg	ND
Selenium	mg/kg	ND
Silver	mg/kg	6.8*
Sodium	mg/kg	ND
Strontium	mg/kg	175*
Thallium	mg/kg	ND
Tin	mg/kg	ND
Vanadium	mg/kg	50.2*
Zinc	mg/kg	92.688

TABLE A-3 (cont.)

BACKGROUND SEDIMENT
TOLERANCE INTERVAL UPPER LIMITS
OR MAXIMUM DETECTED VALUE

FEBRUARY 1989

Analyte	Units	Upper Limit (9 Samples)
Other		
Nitrate	mg/kg	ND
pH	----	9.03 (8.77)
Total Radionuclides		
Gross Alpha	pCi/gm	60
Gross Beta	pCi/gm	50
Uranium 233, 234	pCi/gm	1.669
Uranium 235	pCi/gm	0.176
Uranium 238	pCi/gm	1.755
Strontium 89, 90	pCi/gm	1.390
Plutonium 239, 240	pCi/gm	0.096
Americium 241	pCi/gm	0.029
Cesium 137	pCi/gm	1.578
Tritium	pCi/ml	0.408

ND - Not Detected
* - Maximum Detected Value
() - Tolerance Interval Lower Limit for Two-Sided Parameter

TABLE A-4

BACKGROUND GEOLOGIC MATERIALS
TOLERANCE INTERVAL UPPER LIMITS
OR MAXIMUM DETECTED VALUE
1989

Analyte	Units	Rocky Flats Alluvium (70 Samples)	Colluvium (28 Samples)	Weathered Claystone (17 Samples)	Weathered Sandstone (4 Samples)
Total Metals					
Aluminum	mg/kg	25312	21663	13495	10300*
Antimony	mg/kg	ND	ND	16.2*	ND
Arsenic	mg/kg	15.86	7.7	15.05	3.6*
Barium	mg/kg	155.8	345.8	240.1	165*
Beryllium	mg/kg	11.27	17.75	11.8	2.2*
Cadmium	mg/kg	3.2*	1.8*	ND	ND
Calcium	mg/kg	43079	20811	10183	5940*
Cesium	mg/kg	ND	274*	ND	ND
Chromium	mg/kg	37.9	26.8	16.57	10.7*
Cobalt	mg/kg	18.2*	15.9*	29.7*	20.5*
Copper	mg/kg	20.03	26.7	30.62	19.6*
Iron	mg/kg	22916	29991	41295	12300*
Lead	mg/kg	18.04	26.4	34.5	13.4*
Lithium	mg/kg	44.4	32.1	33.37	7.0*
Magnesium	mg/kg	4425	6151	4896	2520*
Manganese	mg/kg	422.9	545.1	656	305*
Mercury	mg/kg	0.58*	0.44*	0.35*	0.27*
Molybdenum	mg/kg	38.65	32.78	33.68	11.2*
Nickel	mg/kg	43.27	35.4	56.95	14.3*
Potassium	mg/kg	3336	2789	1400*	ND
Selenium	mg/kg	ND	ND	ND	ND
Silver	mg/kg	40.9*	33.5*	18.7*	12.7*
Sodium	mg/kg	ND	3680*	ND	ND
Strontium	mg/kg	226*	111.1	144.42	69.2*
Thallium	mg/kg	ND	ND	ND	ND
Tin	mg/kg	338*	441*	274*	268*
Vanadium	mg/kg	54.67	58.2	47.7	22.2*
Zinc	mg/kg	52.64	98.1	106.7	79.9*

TABLE A-4 (cont.)

BACKGROUND GEOLOGIC MATERIALS
TOLERANCE INTERVAL UPPER LIMITS
OR MAXIMUM DETECTED VALUE
1989

Analyte	Units	Rocky Flats Alluvium (70 Samples)	Colluvium (28 Samples)	Weathered Claystone (17 Samples)	Weathered Sandstone (4 Samples)
Other					
Sulfide	mg/kg	13*	5*	5*	2*
Nitrate	mg/kg	4.3*	4.274	2.0*	1.9*
pH	----	9.64 (6.06)	9.48 (6.96)	10.14 (7.04)	9.2* (8.0)**
Total Radionuclides					
Gross Alpha	pCi/gm	37.108	51.710	52.302	37
Gross Beta	pCi/gm	36.886	35.135	35.743	29
Uranium 233, 234	pCi/gm	1.491	1.759	1.985	0.8
Uranium 235	pCi/gm	0.087	0.169	0.258	0.1
Uranium 238	pCi/gm	1.353	1.675	1.643	1.0
Strontium 89, 90	pCi/gm	0.768	0.776	0.786	0.4
Plutonium 239, 240	pCi/gm	0.017	0.023	0.020	0.01
Americium 241	pCi/gm	0.018	NR	NR	NR
Cesium 137	pCi/gm	0.082	0.113	ND	0.0
Tritium	pCi/ml	0.410	0.299	0.322	0.39

ND - Not Detected
NR - Data Not Received
* - Maximum Detected Value
** - Minimum Detected Value
() - Tolerance Interval Lower Limit for Two-Sided Parameter

TABLE A-5

VOLATILE ORGANIC COMPOUNDS DETECTED IN
UNCONFINED GROUND WATER
SECOND QUARTER 1989

Matrix	Well	Date Sampled	Carbon Tetra-chloride (ug/l)	Tetra-chloro-ethene (ug/l)	Trichloro-ethene (ug/l)	Chloro-form (ug/l)	Methylene Chloride (ug/l)	1,1-Di-Chloro-ethane (ug/l)	1,1-Di-Chloro-ethene (ug/l)	Vinyl Chloride (ug/l)	Acetone (ug/l)	Carbon Disulfide (ug/l)	Total-1,2-Dichloro-ethene (ug/l)	Toluene (ug/l)
Rocky Flats Alluvium	33-86	5/04/89	Dry											
	39-86	5/08/89												
	41-86	5/10/89												
	42-86	5/08/89	1,100	300	190	21J								
	43-86	5/04/89	Dry											
	10-87	5/02/89	Dry											
	15-87	5/01/89	1,100J	190	120	21			5J					
	17-87	5/03/89	47J	160R	17	4J								
	19-87	5/04/89	Dry											
	24-87	5/09/89	Dry											
	26-87	5/09/89	Dry											
	27-87	5/10/89	15	31	4J	3J								
	32-87	5/09/89	Dry											
	33-87	5/09/89	Dry											
	35-87	5/09/89	Dry											
Colluvium	63-86	4/13/89	Dry											
	67-86	5/09/89	Dry											
	29-87	4/24/89												
	44-87	4/13/89	Dry											
Valley Fill Alluvium	35-86	5/03/89			11			59	13	470			3J	
	36-86	5/04/89												
	37-86	5/03/89		30R										
	64-86	5/31/89		8J										
	65-86	4/13/89									2J			
	66-86	6/02/89				26	1J					3J		
	21-87	5/03/89												

TABLE A-5 (cont.)

VOLATILE ORGANIC COMPOUNDS DETECTED IN
UNCONFINED GROUND WATER
SECOND QUARTER 1989

Matrix	Well	Date Sampled	Carbon Tetra-chloride (ug/l)	Tetra-chloro-ethene (ug/l)	Trichloro-ethene (ug/l)	Chloro-form (ug/l)	Methylene Chloride (ug/l)	1,1-Di-Chloro-ethane (ug/l)	1,1-Di-Chloro-ethene (ug/l)	Vinyl Chloride (ug/l)	Acetone (ug/l)	Carbon Disulfide (ug/l)	Total-1,2-Dichloro-ethene (ug/l)	Toluene (ug/l)
Weathered Claystone	1-71	5/01/89	690J	69	230	200			5J					
	2-71	5/01/89		8	440	7		8						
	1-74	5/03/89		45,000	1,800									
	3-74	5/08/89	1,100	50	25	11J								
Weathered Sandstone	62-86	4/17/89									2JB			
	9-87	5/01/89												
	11-87	5/02/89	Dry											
	12-87	5/02/89	Dry											
	14-87	4/24/89	160J	4J	68	16								
	23-87	5/03/89		74R										
	25-87	5/08/89	290	840	120	5J								
	36-87	5/08/89	610	350E	12,000	290E			22J					2J

J - Value estimated below detection limit
E - Value estimated
R - Value rejected by data validation
B - Compound also detected in associated blank.

TABLE A-6

VOLATILE ORGANIC COMPOUNDS DETECTED
IN GROUND WATER
MAXIMUM CONCENTRATIONS[1]

Matrix	Well	Carbon Tetra-chloride[2] (ug/l)	Tetra-chloro-ethene (ug/l)	Trichloro-ethene (ug/l)	Chloro-form	Methylene Chloride	1,1-Di-Chloro-ethane (ug/l)	1,1-Di-Chloro-ethene (ug/l)	Vinyl Chloride (ug/l)	Acetone (ug/l)	Carbon Disulfide (ug/l)	Total-1,2-Dichloro-ethene (ug/l)
Rocky Flats Alluvium	33-86	Dry										
	39-86		845	418								
	41-86		160	3JB		6JB				17		7
	42-86	4835	3200	1400	107		320	26		5J		17
	43-86	6		8								
	10-87	Dry										
	15-87	4305	900	510	42			5J		1300B		
	17-87	47J	160R	83	4J	15				9JB		
	19-87	Dry										
	24-87	Dry								19JB		
	26-87	Dry				5JB				31		
	27-87	15	44	4J	3J	3JB						
	32-87		95	44	2JB			33		6JB		
	33-87	Dry										
	35-87	Dry										
Colluvium	63-86	Dry										
	67-86	Dry										
	29-87		99	4J		26B				9JB		
	44-87	Dry										
Valley Fill Alluvium	35-86	12		19	340	36	62	48	930			1600
	36-86			6								
	37-86		30R									
	64-86		8J									
	65-86					8				2J	3J	
	66-86				26	23					3J	
	21-87		49									
Weathered Claystone	1-71	4800	800	2000	1525	14	535	5J				346
	2-71	40	8	28800	410	12	28	10				92
	1-74		528000	18000	38	5J	20	90		6JB		15
	3-74	1885	1080	812	45	56J		22		84JB		15
Weathered Sandstone	62-86	2J								2JB		
	9-87					10				7JB		
	11-87	605	28	1090	129			4J				
	12-87	58	57	3570	17	9						
	14-87	404	4J	109	23	7		1J		26		
	23-87		74R	4JB	3JB	8				3JB		
	25-87	835	840	258	6JB	13JB				110B		
	36-87	3673	4654	221860	5427	119		1044		38		

ethane

TABLE A-6 (cont.)

VOLATILE ORGANIC COMPOUNDS DETECTED
IN GROUND WATER
MAXIMUM CONCENTRATIONS[1]

---

[1] Data obtained from the 1987, 1988, 1989 field investigations

[2] A carbon tetrachloride concentration value of 2292 ppb was reported for Well No. 39-86 (4 May 1988). This datum is suspect due to problems observed in the analytical laboratory during the first half of 1988. All other ground-water concentration data obtained from the 1987, 1988, and 1989 field investigations (9 data points) show "non-detect" concentration values for carbon tetrachloride at Well No. 39-86.

J Value estimated below detection limit

E Value estimated

R Value rejected by data validation

B Compound also detected in associated blank

TABLE A-7

INORGANICS ABOVE BACKGROUND IN GROUND WATER[1]

Analyte	Number of Results Above Background[2]	Number of Results	Range of Background Concentration[3] (mg/l)	Maximum Concentration[4] (mg/l)
Bicarbonate	45	257	140-719	530
Chloride	172	257	11-607	819
Cyanide	0	62	ND-0.038	ND
Nitrate	164	255	0.18-2.98	15.5
Sulfate	114	257	16-950	1157
Total Dissolved Solids	193	257	170-1761	3219

ND Not detected at contract required detection limit

1 Concentration data obtained from the 1987, 1988, and 1989 field investigations.

2 Compared to background value for appropriate lithologies, listed in Table A-1.

3 Range of maximum values for different classes of ground water.

4 Reported when maximum concentration is above background.

TABLE A-8

DISSOLVED METALS ABOVE BACKGROUND IN GROUND WATER[1]

Analyte	Number of Results Above Background[2]	Number of Results	Range of Background Concentration[3] (mg/l)	Maximum Concentration[4] (mg/l)
Aluminum	119	253	ND-0.327	4.75
Antimony	18	248	ND-ND	0.12
Arsenic	9	247	ND-0.0186	0.007
Barium	215	253	ND-ND	0.93
Cadmium	1	249	ND-ND	0.006
Calcium	161	253	64.6-138	408
Cesium	0	248	ND-ND	ND
Chromium	54	253	ND-0.0122	0.1223
Copper	93	253	ND-ND	0.84
Iron	131	253	ND-0.94	4.35
Lead	15	247	ND-ND	0.04
Lithium	7	60	ND-0.172	0.22
Magnesium	164	253	ND-45.3	136
Manganese	103	253	0.0182-0.686	4.37
Mercury	1	245	ND-0.008	0.013
Molybdenum	41	253	ND-0.112	0.192
Nickel	51	253	ND-0.0432	1.7
Potassium	92	245	ND-21.89	44.5
Selenium	39	246	ND-0.091	0.39
Silver	7	253	ND-ND	0.13
Sodium	117	253	25.6-599	405
Strontium	266	253	ND-0.451	7.7
Thallium	0	240	ND-0.01	0.01
Vanadium	9	253	ND-ND	0.10
Zinc	65	253	ND-0.564	2.70

ND Not detected at contract required detection limit.

1 Concentration data obtained from the 1987, 1988, and 1989 field investigations.

2 Compared to background value for appropriate lithologies, listed in Table A-1.

3 Range of maximum values for different classes of ground water.

4 Reported when maximum concentration is above background.

TABLE A-9

DISSOLVED RADIONUCLIDES ABOVE BACKGROUND IN GROUND WATER[1]

Analyte	Number of Results Above Background[2]	Number of Results	Range of Background Concentration[3] (mg/l)	Maximum Concentration[4] (mg/l)
Gross Alpha	42	179	7-27	250
Gross Beta	46	180	2-18.53	372
Uranium 233,234	62	151	1.1-12.94	34
Uranium 235	62	148	0-0.232	1.7
Uranium 238	73	151	0.6-7.7	28
Strontium 89,90	3	153	0.1-0.878	5.0
Plutonium 239, 240	3	153	0-0.012	0.52
Americium 241	6	153	0-0.019	0.83
Cesium 137	0	3	0.2-0.776	0.3

1 Concentration data obtained from the 1987, 1988, and 1989 field investigations.

2 Compared to background value for appropriate lithologies, listed in Table A-1.

3 Range of maximum values for different classes of ground water.

4 Reported when maximum concentration is above background.

TABLE A-10

VOLATILE ORGANIC COMPOUNDS DETECTED IN SOILS[1]

	Borehole Number	Vinyl Chloride (ug/kg)	Chloro-Ethane (ug/kg)	Methylene Chloride (ug/kg)	Acetone (ug/kg)	Carbon Disulfide (ug/kg)	1,1-Di-Chloro-Ethene (ug/kg)	1,1-Di-Chloro-Ethane (ug/kg)	Total 1,2-Di Chloro-Ethene (ug/kg)	Chloro-Form (ug/kg)	1,2-Di-Chloro-Ethane (ug/kg)	2-Butanone (ug/kg)
903 Pad-Rocky Flats Alluvium	BH2287				48JB							
	BH2387			6J	120B							
	BH2987			11J	430B							
	BH3087			31.6B	230B							33J
903 Pad - Colluvium	BH2487				43.1B							
	BH2587		7J	46.9B	1100B							210J
	BH2687			20B	23							
	BH2787			7J	140B							
	BH2887			12J	70B					17J		
903 Pad - Sandstone	BH2987			10J	430B							
903 Pad - Claystone	BH2287			9J	78B							
	BH2387			9J	150B							
	BH2487			19B	60B							
	BH2587			150JB	1100B					130J		150J
	BH2687			8J	120							
	BH2787			6J	170B							
	BH2887				11JB	58						
	BH3087			9J	200B							16J
Mound - Rocky Flats Alluvium	BH3187			17J	100			32			6J	
	BH3287			9J	120			29				
	BH3387				190							
	BH3487				500							
	BH3587				480							
	BH3687			11J	53							
	BH3787			37.4	48JB							
	BH3887			12J	120B							
Mound - Sandstone	BH3387			15J	320						10J	
	BH3487				130							
Mound - Claystone	BH3187			9J	110					5J		
	BH3287				170					19J		
	BH3587				280							
	BH3687			8J	64							
	BH3787			17JB	150B							
East Trenches Rocky Flats Alluvium	BH3987				220					140		
	BH4087				140							
	BH4187				210							
	BH4287				71							
	BH4387			20J	360							150
	BH4487			11J	160B							
	BH4587											
	BH4687			5J	210B							

TABLE A-10 (cont.)

VOLATILE ORGANIC COMPOUNDS DETECTED IN SOILS[1]

	Borehole Number	Vinyl Chloride (ug/kg)	Chloro-Ethane (ug/kg)	Methylene Chloride (ug/kg)	Acetone (ug/kg)	Carbon Disulfide (ug/kg)	1,1-Di-Chloro-Ethene (ug/kg)	1,1-Di-Chloro-Ethane (ug/kg)	Total 1,2-Di Chloro-Ethene (ug/kg)	Chloro-Form (ug/kg)	1,2-Di-Chloro-Ethane (ug/kg)	2-Butanone (ug/kg)
East Trenches Rocky Flats Alluvium	BH4787			7J	820B	140B					21J	
	BH4887			11B	220B						8J	
	BH4987			7JB	710B						23J	
	BH5087				1000B							
	BH5187			6JB	1700B						24J	
	BH5287			6JB	51B						7J	
	BH5387			11J	2000B						30	
	BH5487			147JB	1600B						120	
	BH5587			8JB	1200B						100	
	BH5687			4B	120B							
East Trenches Sandstone	BH3987				140							58
	BH4287					140				6J		
	BH4487					180B						
	BH4587											
	BH5187					6JB	72B				8J	
	BH5687					26	110B					
East Trenches Claystone	BH3987											72
	BH4087											
	BH4187									7J		
	BH4387			210	180							
	BH4587											
	BH4687			7J	270B							
	BH4787			12JB	770B						100	
	BH4887				1200B							
	BH4987			7JB	120B						34	
	BH5087				1000B						110	
	BH5287			15JB	94B						26	
	BH5387			9JB	2400B						16J	
	BH5487			15JB	460B						20J	
	BH5587			8JB	620B						78	
	BH5787			36B	260B						10J	100

TABLE A-10 (cont.)

VOLATILE ORGANIC COMPOUNDS DETECTED IN SOILS[1]

	Borehole Number	1,1,1-Tri-Chloro-Ethane (ug/kg)	Carbon Tetra-Chloride (ug/kg)	Tri-Chloro-Ethene (ug/kg)	1,1,2-Trichloro-Ethane (ug/kg)	Tetra-Chloro-Ethene (ug/kg)	1,1,2,2-Tetra-Chloro-Ethene (ug/kg)	Toluene (ug/kg)	Ethyl Benzene (ug/kg)	Styrene (ug/kg)	Total Xylenes (ug/kg)	1,3-Di-Chloro-Propene (ug/kg)
903 Pad-Rocky Flats Alluvium	BH2287											
	BH2387											
	BH2987											
	BH3087									17J		
903 Pad - Colluvium	BH2487											
	BH2587			7000		10000		640	780		3300	
	BH2687											
	BH2787											
	BH2887		100	15J		84						
903 Pad - Sandstone	BH2987	5J										
903 Pad - Claystone	BH2287											
	BH2387											
	BH2487											
	BH2587	180J		16000		3800		330	290		480	
	BH2687											
	BH2787											
	BH2887			5J		14J						6J
	BH3087											
Mound - Rocky Flats Alluvium	BH3187					20J		7J				
	BH3287											
	BH3387											
	BH3487											
	BH3587							7J				
	BH3687							7J				
	BH3787											6J
	BH3887											
Mound - Sandstone	BH3387											
	BH3487											
Mound - Claystone	BH3187											
	BH3287											
	BH3587											
	BH3687											
	BH3787											
East Trenches Rocky Flats Alluvium	BH3987											
	BH4087											
	BH4187								125			
	BH4287											
	BH4387	130										
	BH4487											
	BH4587											
	BH4687	190										

TABLE A-10 (cont.)

VOLATILE ORGANIC COMPOUNDS DETECTED IN SOILS[1]

	Borehole Number	1,1,1-Tri-Chloro-Ethane (ug/kg)	Carbon Tetra-Chloride (ug/kg)	Tri-Chloro-Ethene (ug/kg)	1,1,2-Trichloro-Ethane (ug/kg)	Tetra-Chloro-Ethene (ug/kg)	1,1,2,2-Tetra-Chloro-Ethene (ug/kg)	Toluene (ug/kg)	Ethyl Benzene (ug/kg)	Styrene (ug/kg)	Total Xylenes (ug/kg)	1,3-Di-Chloro-Propene (ug/kg)
East Trenches Rocky Flats Alluvium	BH4787	13J										
	BH4887											
	BH4987											
	BH5087											
	BH5187											
	BH5287											
	BH5387											
	BH5487											
	BH5587											
	BH5687											
East Trenches Sandstone	BH3987											
	BH4287											
	BH4487											
	BH4587											
	BH5187											
	BH5687											
East Trenches Claystone	BH3987											
	BH4087											
	BH4187		34									
	BH4387											
	BH4587	180										
	BH4687											
	BH4787						21J					
	BH4887											
	BH4987											
	BH5087											
	BH5287											
	BH5387											
	BH5487											
	BH5587											
	BH5787	110	150	27	62		25					

B - Compound also detected in associated blank Value estimated below detection limit

[1] Concentration data obtained from 1987, 1988 and 1989 field investigations

TABLE A-11

SEMI-VOLATILE ORGANIC COMPOUNDS DETECTED IN SOILS[1]

Borehole Number	N-Nitroso-phenylamine (µg/kg)	di-n-Butyl Phthalate (µg/kg)	bis (2-Ethylhexyl) Phthalate (µg/kg)
903 Pad Rocky Flats Alluvium:			
BH2287	35J	97J	820
BH2387			2300
BH2987			840B
BH3087			
		3400	3100
903 Pad Colluvium:			
BH2487	36J	690J	3300B
BH2587		63J	1900B
BH2687		150J	4200J
BH2787			340
BH2887	51J	61J	3400
903 Pad Sandstone:			
BH2987			
903 Pad Claystone:			
BH2287	89J		
BH2387			
BH2487		640B	2600B
BH2587		56J	830B
BH2687		160J	800
BH2787			220J
BH2887			2100
BH3087			1800B
Mound Rocky Flats Alluvium:			
BH3187			490
BH3287			310J
BH3387			530
BH3487		50J	450
BH3587		92J	680
BH3687		83J	480
BH3787		170J	8700B
BH3887		73J	4600
Mound Sandstone:			
BH3387			450
BH3487		35J	220J
Mound Claystone:			
BH3187	40J		430
BH3287			9J
BH3587			320J
BH3687		38J	360
BH3787		41J	550

[1] Concentration data obtained from the 1987 field investigations concentrations reflect maximum values for the stated borehole.

TABLE A-11 (continued)

SEMI-VOLATILE ORGANIC COMPOUNDS DETECTED IN SOILS

Borehole Number	N-Nitroso-phenylamine (µg/kg)	di-n-Butyl Phthalate (µg/kg)	bis (2-Ethylhexyl) Phthalate (µg/kg)
East Trenches Rocky Flats Alluvium:			
BH3987	33J		360
BH4087			260J
BH4187			380
BH4287		170J	500
BH4387		49J	630
BH4487	40JB		380B
BH4587			880
BH4687			250J
BH4787	120JB	260JB	1000B
BH4887		42JB	670B
BH4987	48J	68JB	1100B
BH5087		49JB	610B
BH5187	52J	120JB	620B
BH5287	370B	120JB	650B
BH5387	38JB	44JB	1300B
BH5487	250JB	90JB	1200B
BH5587		94JB	1200B
BH5687		50JB	1100B
East Trenches Sandstone:			
BH3987			250J
BH4287		39J	520
BH4487		38JB	920B
BH4587			220J
BH5187		86JB	720B
BH5687	42JB	47JB	1000B
East Trenches Claystone:			
BH3987	37JB		250J
BH4087			200J
BH4187			190J
BH4387		34JB	730B
BH4587			190J
BH4687			350
BH4787		59JB	1100B
BH4887		42JB	560B
BH4987			580B
BH5087		55JB	690B
BH5287	280JB	84JB	680B
BH5387		58JB	670B
BH5487		34JB	650B
BH5587		80JB	1000B
BH5787	140J		1000B

TABLE A-12

TOTAL METALS ABOVE BACKGROUND IN SOILS[1]

Analyte	Number of Results Above Background[2]	Number of Results	Range of Background Concentration[3] (mg/kg)	Maximum Concentration[4] (mg/kg)
Aluminum	2	204	10300-25312	70600
Antimony	1	204	ND-16.2	24
Arsenic	35	204	3.6-15.86	37
Barium	6	204	155.8-345.8	1899
Beryllium	0	204	2.2-17.75	1.7
Cadmium	58	204	ND-3.2	6.2
Calcium	31	204	5990-43079	25400
Cesium	0	24	ND-274	ND
Chromium	3	204	10.7-37.9	58
Cobalt	1	204	15.9-29.7	33.1
Copper	1	204	19.6-30.62	25
Iron	7	204	12300-41295	42700
Lead	2	204	13.4-34.5	45.6
Lithium	0	20	7.0-44.4	12.71
Magnesium	2	204	2520-6151	5260
Manganese	14	204	305-659	3540
Mercury	1	204	0.27-0.58	114
Molybdenum	0	15	11.2-38.65	ND
Nickel	4	204	14.3-56.95	36.1
Potassium	3	204	ND-3336	4170
Selenium	1	204	ND-ND	1.5
Silver	0	211	12.7-40.9	ND
Sodium	2	211	ND-3680	1400
Strontium	0	211	69.2-226	184
Thallium	0	211	ND-ND	ND
Tin	0	12	268-338	ND
Vanadium	10	211	22.2-58.2	108
Zinc	2	211	52.69-106.7	58

ND Not detected
1 Concentration data obtained from the 1987, 1988, and 1989 field investigations.
2 Compared to background value for appropriate lithologies, listed in Table A-4.
3 Range of maximum values for different geologic materials.
4 Reported when maximum concentration is above background.

TABLE A-13

TOTAL RADIONUCLIDES ABOVE BACKGROUND IN SOILS[1]

Analyte	Number of Results Above Background[2]	Number of Results	Range of Background Concentration[3] (pCi/gm)	Maximum Concentration[4] (pCi/gm)
Gross Alpha	12	227	37-52.302	480
Gross Beta	5	227	29-36.886	37
Uranium 233,234	7	225	0.8-1.985	3.4
Uranium 235	0	0	0.087-0.258	-
Uranium 238	13	227	1.0-1.675	3.9
Strontium 89,90	10	227	0.4-0.786	1.1
Plutonium 239,240	112	227	0.01-0.020	94
Americium 241	118	227	NR-0.018	22
Cesium 137	42	227	0.0-0.113	3.1
Tritium (pCi/ml)	11	227	0.299-0.410	0.69
Radium 226	0	9	0.9-1.3	-
Radium 228	0	9	1.1-2.5	-

NR Not reported

1 Concentration data obtained from the 1987, 1988, and 1989 field investigations.

2 Compared to background value for appropriate lithologies, listed in Table A-3.

3 Range of maximum values for different geologic materials.

4 Reported when maximum concentration is above background.

TABLE A-14

VOLATILE ORGANIC COMPOUNDS DETECTED IN SEDIMENTS[1]

Sediment Station Number	Chloro-methane (ug/kg)	Vinyl Chloride (ug/kg)	Chloro-Ethane (ug/kg)	Methylene Chloride (ug/kg)	Acetone (ug/kg)	Carbon Disulfide (ug/kg)	Chloro-Ethene (ug/kg)	1,1-Di-Chloro-Ethane (ug/kg)	1,1-Di-Chloro-Ethene (ug/kg)	Total 1,2-Di Chloro-Form (ug/kg)	1,2-Di-Chloro-Ethane (ug/kg)	2-Butanone (ug/kg)
SD011				15B	16J							12
SD012					39		5J					
SD013					47B							
SD025				3JB								
SD026				3JB								
SD027				22B	5JB							
SD028				11B	8JB							
SD029	60			11B	18							
SD030	19J			16JB	220B	6J				18		
SD031				8B	8JB							

Sediment Station Number	1,1,1-Tri-Chloro-Ethane (ug/kg)	Carbon Tetra-Chloride (ug/kg)	Tri-Chloro-Ethene (ug/kg)	1,1,2-Trichloro-Ethane (ug/kg)	Tetra-Chloro-Ethene (ug/kg)	1,1,2,2-Tetra-Chloro-Ethene (ug/kg)	Toluene (ug/kg)	Ethyl Benzene (ug/kg)	Styrene (ug/kg)	Total Xylenes (ug/kg)	1,3-Di-Chloro-Propane (ug/kg)
SD011					39		1J	1J		7J	
SD012			4J								
SD013											
SD025			5J								
SD026			3J								
SD027											
SD028											
SD029							2J				
SD030			7J				6J				
SD031			8								

B Compound also detected in associated blankJ - Value estimated below detection

1 Concentration data obtained from the 1986, 1987, 1988 and 1989 field investigations

TABLE A-15

TOTAL METALS ABOVE BACKGROUND SEDIMENTS[1]

Analyte	Number of Results Above Background[2]	Number of Results	Background Concentration (mg/kg)	Maximum Concentration[3] (mg/kg)
Aluminum	1	25	24789	24800
Antimony	3	25	ND	24.5
Arsenic	0	24	13.0	4.6
Barium	4	25	182	300
Beryllium	20	25	ND	15.5
Cadmium	6	25	ND	2.3
Calcium	6	25	72551	132000
Cesium	0	25	ND	ND
Chromium	0	25	43.38	26.8
Cobalt	1	25	ND	12
Copper	5	25	22.0	40.4
Iron	2	25	28308	28900
Lead	3	25	39.502	66.4
Lithium	11	24	ND	27.8
Magnesium	4	25	4110	5970
Manganese	4	25	372.20	1390
Mercury	1	20	ND	0.72
Molybdenum	6	25	ND	10.3
Nickel	1	25	29.9	34
Potassium	8	25	ND	5180
Selenium	1	25	ND	21.3
Silver	9	25	6.8	48.9
Sodium	5	25	ND	670
Strontium	1	25	175	179
Thallium	1	25	ND	8.5
Tin	9	25	ND	1080
Vanadium	2	25	50.2	58.4
Zinc	10	25	92.688	735

ND Not detected

1 Concentration data obtained from the 1986, 1987, 1988, and 1989 field investigations.

2 Compared to background values listed in Table A-3.

3 Reported when maximum concentration is above background.

TABLE A-16

TOTAL RADIONUCLIDES ABOVE BACKGROUND IN SEDIMENTS[1]

Analyte	Number of Results Above Background[2]	Number of Results	Background Concentration[3] (pCi/gm)	Maximum Concentration[3] (pCi/gm)
Gross Alpha	3	12	60	77
Gross Beta	0	12	50	46
Uranium 233,234	1	12	1.669	2.1
Uranium 235	1	12	0.176	0.2
Uranium 238	1	12	1.735	2.7
Strontium 89,90	0	12	1.390	0.5
Plutonium 239,240	8	12	0.096	0.85
Americium 241	0	3	0.029	0.02
Cesium 137	1	11	1.578	0.3
Tritium (pCi/ml)	0	12	0.408	0.18
Radium 226	1	4	1.0	1.3
Radium 228	0	4	2.1	1.4

1 Concentration data obtained from the 1986, 1987, 1988, and 1989 field investigations.

2 Compared to background values listed in Table A-3.

3 Reported when maximum concentration is above background.

APPENDIX B

SURFACE WATER SAMPLING RESULTS

OPERABLE UNIT NO. 2

APPENDIX B-1

SURFACE WATER SAMPLING RESULTS

VOLATILE ORGANIC COMPOUNDS

Surface Water

Volatile Organic Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Chloro methane ug/l	Bromo methane ug/l	Vinyl Chloride ug/l	Chloro ethane ug/l	Methylene Chloride ug/l	Acetone ug/l	Carbon Disulfide ug/l	1,1-Di-chloro ethene ug/l	1,1-Di-chloro ethane ug/l
SW-050	/ /	DRY								
SW-050	07/21/87	NR	NR	NR	NR	NR	NR	NR	140	NR
SW-050	06/27/88	10 U	10 U	10 U	10 U	2 JB	4 JB	5 U	5 U	5 U
SW-050	06/27/88	Insufficient Sample or Volatile Organic Analysis not requested.								
SW-050	04/17/89	DRY								
SW-050	05/10/89	DRY								
SW-050	06/27/89	10 U V	10 U V	10 U V	10 U V	5 U V	10 U V	5 U V	5 U V	5 U V
SW-050	07/18/89	10 U V	10 U V	10 U V	10 U V	5 U V	1 JB R	5 U V	5 U V	5 U V
SW-050	08/11/89	DRY								
SW-050	09/12/89	DRY								
SW-050	10/04/89	DRY								
SW-050	11/03/89	DRY								
SW-050	12/01/89	DRY								
SW-050	01/05/90	DRY								
SW-050	02/02/90	DRY								
SW-050	03/17/90	DRY								
SW-051	07/21/87	NR	NR	NR	NR	NR	NR	NR	101	NR
SW-051	06/23/88	DRY								
SW-051	04/17/89	DRY								
SW-051	05/10/89	DRY								
SW-051	06/27/89	10 U V	10 U V	10 U V	10 U V	5 U V	10 U V	5 U V	5 U V	5 U V
SW-051	07/18/89	DRY								
SW-051	08/11/89	DRY								
SW-051	09/12/89	DRY								
SW-051	10/04/89	DRY								
SW-051	11/03/89	DRY								
SW-051	12/01/89	DRY								
SW-051	01/05/90	DRY								
SW-051	02/02/90	DRY								
SW-052	07/21/87	NR	NR	NR	NR	NR	NR	NR	73	NR
SW-052	06/23/88	10 U	10 U	10 U	10 U	6 B	7 JB	5 U	5 U	5 U
SW-052	04/17/89	DRY								
SW-052	05/10/89	DRY								
SW-052	06/09/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Total-1,2-Dichloro ethene ug/l	Chloroform ug/l	1,2-Di-chloro ethane ug/l	2-Butanone ug/l	1,1,1-Tri chloro ethane ug/l	Carbon Tetra chloride ug/l	Vinyl Acetate ug/l	Bromo dichloro methane ug/l	1,2-Di-chloro propane ug/l
SW-050	/ /	DRY								
SW-050	07/21/87	5 U	84	5 U	NR	5 U	1005	NR	NR	NR
SW-050	06/27/88	NR	6	5 U	10 U	1 J	9	10 U	5 U	5 U
SW-050	06/27/88	Insufficient Sample or Volatile Organic Analysis not requested.								
SW-050	04/17/89	DRY								
SW-050	05/10/89	DRY								
SW-050	06/27/89	5 U V	8 V	5 U V	10 U V	5 U V	2 J A	10 U V	5 U V	5 U V
SW-050	07/18/89	5 U V	6 V	5 U V	10 U V	5 U V	10 V	10 U V	5 U V	5 U V
SW-050	08/11/89	DRY								
SW-050	09/12/89	DRY								
SW-050	10/04/89	DRY								
SW-050	11/03/89	DRY								
SW-050	12/01/89	DRY								
SW-050	01/05/90	DRY								
SW-050	02/02/90	DRY								
SW-050	03/17/90	DRY								
SW-051	07/21/87	5 U	5 U	5 U	NR	5 U	282	NR	NR	NR
SW-051	06/23/88	DRY								
SW-051	04/17/89	DRY								
SW-051	05/10/89	DRY								
SW-051	06/27/89	5 U V	4 J A	5 U V	10 U V	5 U V	46 V	10 U V	5 U V	5 U V
SW-051	07/18/89	DRY								
SW-051	08/11/89	DRY								
SW-051	09/12/89	DRY								
SW-051	10/04/89	DRY								
SW-051	11/03/89	DRY								
SW-051	12/01/89	DRY								
SW-051	01/05/90	DRY								
SW-051	02/02/90	DRY								
SW-052	07/21/87	5 U	5 U	5 U	NR	5 U	5 U	NR	NR	NR
SW-052	06/23/88	NR	2 J	5 U	10 U	1 J	3 J	10 U	5 U	5 U
SW-052	04/17/89	DRY								
SW-052	05/10/89	DRY								
SW-052	06/09/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Cis-1,3-Dichloro propene ug/l	Trichloro ethene ug/l	Dibromo chloro methane ug/l	1,1,2-Tri chloro ethane ug/l	Benzene ug/l	Trans-1,3-Dichloro propene ug/l	Bromoform ug/l	4-Methyl-2-penta none ug/l	2-Hexanone ug/l
SW-050	/ /	DRY								
SW-050	07/21/87	NR	40	NR	5 U	NR	NR	NR	NR	NR
SW-050	06/27/88	5 U	13	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-050	06/27/88	Insufficient Sample or Volatile Organic Analysis not requested.								
SW-050	04/17/89	DRY								
SW-050	05/10/89	DRY								
SW-050	06/27/89	5 U V	9 V	5 U V	5 U V	5 U A	5 U V	5 U V	10 U V	10 U R
SW-050	07/18/89	5 U V	8 V	5 U V	5 U V	5 U V	5 U V	5 U V	10 U V	10 U R
SW-050	08/11/89	DRY								
SW-050	09/12/89	DRY								
SW-050	10/04/89	DRY								
SW-050	11/03/89	DRY								
SW-050	12/01/89	DRY								
SW-050	01/05/90	DRY								
SW-050	02/02/90	DRY								
SW-050	03/17/90	DRY								
SW-051	07/21/87	NR	17	NR	5 U	NR	NR	NR	NR	NR
SW-051	06/23/88	DRY								
SW-051	04/17/89	DRY								
SW-051	05/10/89	DRY								
SW-051	06/27/89	5 U V	5 V	5 U V	5 U V	5 U A	5 U V	5 U V	10 U V	10 U R
SW-051	07/18/89	DRY								
SW-051	08/11/89	DRY								
SW-051	09/12/89	DRY								
SW-051	10/04/89	DRY								
SW-051	11/03/89	DRY								
SW-051	12/01/89	DRY								
SW-051	01/05/90	DRY								
SW-051	02/02/90	DRY								
SW-052	07/21/87	NR	5 U	NR	5 U	NR	NR	NR	NR	NR
SW-052	06/23/88	5 U	9	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-052	04/17/89	DRY								
SW-052	05/10/89	DRY								
SW-052	06/09/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Tetra chloro ethene ug/l	1,1,2,2-Tetrachloro ethane ug/l	Toluene ug/l	Chloro benzene ug/l	Ethyl benzene ug/l	Styrene ug/l	Total Xylenes ug/l
SW-050	/ /	DRY						
SW-050	07/21/87	65	NR	NR	NR	NR	NR	NR
SW-050	06/27/88	50	5 U	5 U	5 U	5 U	5 U	5 U
SW-050	06/27/88	Insufficient Sample or Volatile Organic Analysis not requested.						
SW-050	04/17/89	DRY						
SW-050	05/10/89	DRY						
SW-050	06/27/89	15 V	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-050	07/18/89	19 V	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V
SW-050	08/11/89	DRY						
SW-050	09/12/89	DRY						
SW-050	10/04/89	DRY						
SW-050	11/03/89	DRY						
SW-050	12/01/89	DRY						
SW-050	01/05/90	DRY						
SW-050	02/02/90	DRY						
SW-050	03/17/90	DRY						
SW-051	07/21/87	44	NR	NR	NR	NR	NR	NR
SW-051	06/23/88	DRY						
SW-051	04/17/89	DRY						
SW-051	05/10/89	DRY						
SW-051	06/27/89	9 V	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-051	07/18/89	DRY						
SW-051	08/11/89	DRY						
SW-051	09/12/89	DRY						
SW-051	10/04/89	DRY						
SW-051	11/03/89	DRY						
SW-051	12/01/89	DRY						
SW-051	01/05/90	DRY						
SW-051	02/02/90	DRY						
SW-052	07/21/87	5 U	NR	NR	NR	NR	NR	NR
SW-052	06/23/88	28	5 U	5 U	5 U	5 U	5 U	5 U
SW-052	04/17/89	DRY						
SW-052	05/10/89	DRY						
SW-052	06/09/89	DRY						

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Chloro methane ug/l	Bromo methane ug/l	Vinyl Chloride ug/l	Chloro ethene ug/l	Methylene Chloride ug/l	Acetone ug/l	Carbon Disulfide ug/l	1,1-Di-chloro ethene ug/l	1,1-Di-chloro ethane ug/l
SW-052	07/07/89	DRY								
SW-052	08/11/89	DRY								
SW-052	09/28/89	DRY								
SW-052	10/04/89	DRY								
SW-052	11/03/89	DRY								
SW-052	12/01/89	DRY								
SW-052	01/05/90	DRY								
SW-052	02/02/90	DRY								
SW-052	03/17/90	DRY								
SW-055	07/21/87	NR	NR	NR	NR	NR	NR	NR	50	NR
SW-055	07/21/87	Insufficient Sample or Volatile Organic Analysis not requested.								
SW-055	06/22/88	10 U	10 U	2 J	10 U	5 B	5 JB	5 U	5 U	5 U
SW-055	04/17/89	10 U A	10 U A	10 U A	10 U A	5 U A	5 J A	5 U A	5 U A	5 U A
SW-055	05/25/89	Data not yet received								
SW-055	06/28/89	10 U V	10 U V	10 U V	10 U V	5 U V	10 U V	5 U V	5 U V	5 U V
SW-055	07/18/89	10 U V	10 U V	10 U V	10 U V	5 U V	1 JB R	5 U V	5 U V	5 U V
SW-055	08/16/89	10 U V	10 U V	10 U V	10 U V	1 JB A	3 JB A	5 U V	5 U V	5 U V
SW-055	09/20/89	10 U	10 U	10 U	10 U	5 U	10 U	5 U	5 U	5 U
SW-055	10/19/89	10 U	10 U	10 U	10 U	5 U	10 U	5 U	5 U	5 U
SW-055	11/09/89	10 U	10 U	10 U	10 U	5 U	10 U	5 U	5 U	5 U
SW-055	12/07/89	Data not yet received								
SW-055	01/16/90	Data not yet received								
SW-055	02/23/90	Data not yet received								
SW-055	03/15/90	Data not yet received								
SW-057	07/21/87	NR	NR	NR	NR	NR	NR	NR	40	NR
SW-057	06/23/88	DRY								
SW-057	04/17/89	DRY								
SW-057	05/10/89	DRY								
SW-057	06/09/89	DRY								
SW-057	07/07/89	DRY								
SW-057	08/11/89	DRY								
SW-057	09/16/89	DRY								
SW-057	10/04/89	DRY								
SW-057	11/03/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
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DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Total-1,2-Dichloro ethene ug/l	Chloroform ug/l	1,2-Di-chloro ethane ug/l	2-Butanone ug/l	1,1,1-Tri chloro ethane ug/l	Carbon Tetra chloride ug/l	Vinyl Acetate ug/l	Bromo dichloro methane ug/l	1,2-Di-chloro propane ug/l
SW-052	07/07/89	DRY								
SW-052	08/11/89	DRY								
SW-052	09/28/89	DRY								
SW-052	10/04/89	DRY								
SW-052	11/03/89	DRY								
SW-052	12/01/89	DRY								
SW-052	01/05/90	DRY								
SW-052	02/02/90	DRY								
SW-052	03/17/90	DRY								
SW-055	07/21/87	5 U	5 U	5 U	NR	5 U	5 U	NR	NR	NR
SW-055	07/21/87	Insufficient Sample or Volatile Organic Analysis not requested.								
SW-055	06/22/88	NR	5 U	5 U	10 U	5 U	5 U	10 U	5 U	5 U
SW-055	04/17/89	5 U A	5 U A	5 U A	10 U R	5 U A	5 U B	10 U A	5 U A	5 U A
SW-055	05/25/89	Data not yet received								
SW-055	06/28/89	5 U V	5 U V	5 U V	10 U V	5 U V	5 U V	10 U V	5 U V	5 U V
SW-055	07/18/89	5 U V	5 U V	5 U V	10 U V	5 U V	5 U V	10 U V	5 U V	5 U V
SW-055	08/16/89	5 U V	5 U V	5 U V	10 U V	5 U V	5 U V	10 U V	5 U V	5 U V
SW-055	09/20/89	5 U	5 U	5 U	10 U	5 U	5 U	10 U	5 U	5 U
SW-055	10/19/89	11	5 U	5 U	10 U	5 U	5 U	10 U	5 U	5 U
SW-055	11/09/89	5 U	5 U	5 U	10 U	5 U	5 U	10 U	5 U	5 U
SW-055	12/07/89	Data not yet received								
SW-055	01/16/90	Data not yet received								
SW-055	02/23/90	Data not yet received								
SW-055	03/15/90	Data not yet received								
SW-057	07/21/87	5 U	5 U	5 U	NR	5 U	5 U	NR	NR	NR
SW-057	06/23/88	DRY								
SW-057	04/17/89	DRY								
SW-057	05/10/89	DRY								
SW-057	06/09/89	DRY								
SW-057	07/07/89	DRY								
SW-057	08/11/89	DRY								
SW-057	09/16/89	DRY								
SW-057	10/04/89	DRY								
SW-057	11/03/89	DRY								

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DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Cis-1,3-Dichloro propene ug/l	Trichloro ethene ug/l	Dibromo chloro methane ug/l	1,1,2-Tri chloro ethane ug/l	Benzene ug/l	Trans-1,3-Dichloro propene ug/l	Bromoform ug/l	4-Methyl-2-pentanone ug/l	2-Hexanone ug/l
SW-052	07/07/89	DRY								
SW-052	08/11/89	DRY								
SW-052	09/28/89	DRY								
SW-052	10/04/89	DRY								
SW-052	11/03/89	DRY								
SW-052	12/01/89	DRY								
SW-052	01/05/90	DRY								
SW-052	02/02/90	DRY								
SW-052	03/17/90	DRY								
SW-055	07/21/87	NR	5 U	NR	5 U	NR	NR	NR	NR	NR
SW-055	07/21/87	Insufficient Sample or Volatile Organic Analysis not requested.								
SW-055	06/22/88	5 U	87	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-055	04/17/89	5 U A	44 A	5 U A	5 U A	5 U A	5 U A	5 U A	10 U A	10 U A
SW-055	05/25/89	Data not yet received								
SW-055	06/28/89	5 U V	19 V	5 U V	5 U V	5 U A	5 U V	5 U V	10 U V	10 U R
SW-055	07/18/89	5 U V	19 V	5 U V	5 U V	5 U V	5 U V	5 U V	10 U V	10 U R
SW-055	08/16/89	5 U V	28 V	5 U V	5 U V	5 U A	5 U V	5 U V	10 U V	10 U V
SW-055	09/20/89	5 U	24	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-055	10/19/89	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-055	11/09/89	5 U	65	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-055	12/07/89	Data not yet received								
SW-055	01/16/90	Data not yet received								
SW-055	02/23/90	Data not yet received								
SW-055	03/15/90	Data not yet received								
SW-057	07/21/87	NR	5 U	NR	5 U	NR	NR	NR	NR	NR
SW-057	06/23/88	DRY								
SW-057	04/17/89	DRY								
SW-057	05/10/89	DRY								
SW-057	06/09/89	DRY								
SW-057	07/07/89	DRY								
SW-057	08/11/89	DRY								
SW-057	09/16/89	DRY								
SW-057	10/04/89	DRY								
SW-057	11/03/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Tetra chloro ethene ug/l	1,1,2,2-Tetrachloro ethane ug/l	Toluene ug/l	Chloro benzene ug/l	Ethyl benzene ug/l	Styrene ug/l	Total Xylenes ug/l
SW-052	07/07/89	DRY						
SW-052	08/11/89	DRY						
SW-052	09/28/89	DRY						
SW-052	10/04/89	DRY						
SW-052	11/03/89	DRY						
SW-052	12/01/89	DRY						
SW-052	01/05/90	DRY						
SW-052	02/02/90	DRY						
SW-052	03/17/90	DRY						
SW-055	07/21/87	5 U	NR	NR	NR	NR	NR	NR
SW-055	07/21/87	Insufficient Sample or Volatile Organic Analysis not requested.						
SW-055	06/22/88	2 J	5 U	1 J	5 U	5 U	5 U	5 U
SW-055	04/17/89	5 U A	5 U A	5 U A	5 U A	5 U A	5 U A	5 U A
SW-055	05/25/89	Data not yet received						
SW-055	06/28/89	5 U V	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-055	07/18/89	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V
SW-055	08/16/89	5 U V	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-055	09/20/89	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SW-055	10/19/89	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SW-055	11/09/89	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SW-055	12/07/89	Data not yet received						
SW-055	01/16/90	Data not yet received						
SW-055	02/23/90	Data not yet received						
SW-055	03/15/90	Data not yet received						
SW-057	07/21/87	5 U	NR	NR	NR	NR	NR	NR
SW-057	06/23/88	DRY						
SW-057	04/17/89	DRY						
SW-057	05/10/89	DRY						
SW-057	06/09/89	DRY						
SW-057	07/07/89	DRY						
SW-057	08/11/89	DRY						
SW-057	09/16/89	DRY						
SW-057	10/04/89	DRY						
SW-057	11/03/89	DRY						

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Chloro methane ug/l	Bromo methane ug/l	Vinyl Chloride ug/l	Chloro ethane ug/l	Methylene Chloride ug/l	Acetone ug/l	Carbon Disulfide ug/l	1,1-Di-chloro ethane ug/l	1,1-Di-chloro ethane ug/l
SW-057	12/01/89	DRY								
SW-057	01/05/90	DRY								
SW-057	02/02/90	DRY								
SW-057	03/17/90	DRY								
SW-058	07/21/87	NR	NR	NR	NR	NR	NR	NR	5 U	NR
SW-058	06/23/88	10 U	10 U	10 U	10 U	6 B	7 JB	5 U	5 U	5 U
SW-058	04/17/89	DRY								
SW-058	05/10/89	DRY								
SW-058	06/28/89	10 U V	10 U V	10 U V	10 U V	2 JB A	11 A	2 J A	5 U V	5 U V
SW-058	07/14/89	DRY								
SW-058	08/11/89	DRY								
SW-058	09/20/89	DRY								
SW-058	10/04/89	DRY								
SW-058	11/20/89	DRY								
SW-058	12/01/89	DRY								
SW-058	01/05/90	DRY								
SW-058	02/02/90	DRY								
SW-077	06/22/88	10 U	10 U	10 U	10 U	6 B	3 JB	5 U	6	1 J
SW-077	03/30/89	DRY								
SW-077	05/11/89	DRY								
SW-077	06/27/89	10 U V	10 U V	10 U V	10 U V	5 U V	12 A	3 J A	5 U V	5 U V
SW-077	07/18/89	DRY								
SW-077	08/16/89	10 U V	10 U V	10 U V	10 U V	5 U V	2 JB A	5 U V	5 U V	5 U V
SW-077	09/20/89	DRY								
SW-077	10/04/89	DRY								
SW-077	11/09/89	DRY								
SW-077	12/01/89	DRY								
SW-077	01/05/90	DRY								
SW-077	02/02/90	DRY								
SW-077	03/16/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Total-1,2-Dichloro ethene ug/l	Chloroform ug/l	1,2-Di-chloro ethane ug/l	2-Butanone ug/l	1,1,1-Tri chloro ethane ug/l	Carbon Tetra chloride ug/l	Vinyl Acetate ug/l	Bromo dichloro methane ug/l	1,2-Di-chloro propane ug/l
SW-057	12/01/89	DRY								
SW-057	01/05/90	DRY								
SW-057	02/02/90	DRY								
SW-057	03/17/90	DRY								
SW-058	07/21/87	5 U	5 U	5 U	NR	5 U	5 U	NR	NR	NR
SW-058	06/23/88	NR	9	5 U	10 U	5 U	6	10 U	5 U	5 U
SW-058	04/17/89	DRY								
SW-058	05/10/89	DRY								
SW-058	06/28/89	5 U V	2 J A	5 U V	10 U R	5 U V	1 J A	10 U V	5 U V	5 U V
SW-058	07/14/89	DRY								
SW-058	08/11/89	DRY								
SW-058	09/20/89	DRY								
SW-058	10/04/89	DRY								
SW-058	11/20/89	DRY								
SW-058	12/01/89	DRY								
SW-058	01/05/90	DRY								
SW-058	02/02/90	DRY								
SW-077	06/22/88	NR	68	5 U	10 U	9	5 U	10 U	5 U	5 U
SW-077	03/30/89	DRY								
SW-077	05/11/89	DRY								
SW-077	06/27/89	6 V	3 J A	5 U V	10 U R	5 U V	5 U V	10 U V	5 U V	5 U V
SW-077	07/18/89	DRY								
SW-077	08/16/89	5 U V	5 U V	5 U V	10 U V	5 U V	5 U V	10 U V	5 U V	5 U V
SW-077	09/20/89	DRY								
SW-077	10/04/89	DRY								
SW-077	11/09/89	DRY								
SW-077	12/01/89	DRY								
SW-077	01/05/90	DRY								
SW-077	02/02/90	DRY								
SW-077	03/16/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value
J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Cis-1,3-Dichloro propene ug/l	Trichloro ethene ug/l	Dibromo chloro methane ug/l	1,1,2-Tri chloro ethane ug/l	Benzene ug/l	Trans-1,3-Dichloro propene ug/l	Bromoform ug/l	4-Methyl-2-penta none ug/l	2-Hexanone ug/l
SW-057	12/01/89	DRY								
SW-057	01/05/90	DRY								
SW-057	02/02/90	DRY								
SW-057	03/17/90	DRY								
SW-058	07/21/87	NR	5 U	NR	5 U	NR	NR	NR	NR	NR
SW-058	06/23/88	5 U	8	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-058	04/17/89	DRY								
SW-058	05/10/89	DRY								
SW-058	06/28/89	5 U V	5 U V	5 U V	5 U V	5 U A	5 U V	5 U V	10 U R	10 U R
SW-058	07/14/89	DRY								
SW-058	08/11/89	DRY								
SW-058	09/20/89	DRY								
SW-058	10/04/89	DRY								
SW-058	11/20/89	DRY								
SW-058	12/01/89	DRY								
SW-058	01/05/90	DRY								
SW-058	02/02/90	DRY								
SW-077	06/22/88	5 U	2500	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-077	03/30/89	DRY								
SW-077	05/11/89	DRY								
SW-077	06/27/89	5 U V	47 A	5 U V	5 U V	5 U A	5 U V	5 U V	10 U R	10 U R
SW-077	07/18/89	DRY								
SW-077	08/16/89	5 U V	5 U V	5 U V	5 U V	5 U A	5 U V	5 U V	10 U V	10 U V
SW-077	09/20/89	DRY								
SW-077	10/04/89	DRY								
SW-077	11/09/89	DRY								
SW-077	12/01/89	DRY								
SW-077	01/05/90	DRY								
SW-077	02/02/90	DRY								
SW-077	03/16/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Tetra chloro ethene ug/l	1,1,2,2-Tetrachloro ethene ug/l	Toluene ug/l	Chloro benzene ug/l	Ethyl benzene ug/l	Styrene ug/l	Total Xylenes ug/l
SW-057	12/01/89	DRY						
SW-057	01/05/90	DRY						
SW-057	02/02/90	DRY						
SW-057	03/17/90	DRY						
SW-058	07/21/87	5 U	NR	NR	NR	NR	NR	NR
SW-058	06/23/88	14	5 U	5 U	5 U	5 U	5 U	5 U
SW-058	04/17/89	DRY						
SW-058	05/10/89	DRY						
SW-058	06/28/89	5 U V	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-058	07/14/89	DRY						
SW-058	08/11/89	DRY						
SW-058	09/20/89	DRY						
SW-058	10/04/89	DRY						
SW-058	11/20/89	DRY						
SW-058	12/01/89	DRY						
SW-058	01/05/90	DRY						
SW-058	02/02/90	DRY						
SW-077	06/22/88	41	5 U	5 U	5 U	5 U	5 U	5 U
SW-077	03/30/89	DRY						
SW-077	05/11/89	DRY						
SW-077	06/27/89	5 U V	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-077	07/18/89	DRY						
SW-077	08/16/89	5 U V	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-077	09/20/89	DRY						
SW-077	10/04/89	DRY						
SW-077	11/09/89	DRY						
SW-077	12/01/89	DRY						
SW-077	01/05/90	DRY						
SW-077	02/02/90	DRY						
SW-077	03/16/90	Data not yet received						

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 53

Station Number	Date Sampled	Chloro methane ug/l	Bromo methane ug/l	Vinyl Chloride ug/l	Chloro ethane ug/l	Methylene Chloride ug/l	Acetone ug/l	Carbon Disulfide ug/l	1,1-Di-chloro ethene ug/l	1,1-Di-chloro ethane ug/l
SW-053	07/21/87	NR	NR	NR	NR	NR	NR	NR	5 U	NR
SW-053	06/23/88	10 U	10 U	10 U	10 U	6 B	9 JB	5 U	5 U	5 U
SW-053	06/23/88	Insufficient Sample or Volatile Organic Analysis not requested.								
SW-053	04/05/89	10 U V	10 U V	10 U V	10 U V	5 B A	8 JB A	2 J A	5 U V	5 U V
SW-053	05/23/89	10 U V	10 U V	10 U V	10 U V	9 B A	10 U V	5 U V	5 U V	5 U V
SW-053	06/26/89	10 U A	10 U A	10 U A	10 U A	5 U A	11 A	5 U A	5 U A	5 U A
SW-053	07/19/89	DRY								
SW-053	08/15/89	10 U V	10 U V	10 U V	10 U V	5 U V	3 J A	5 U V	5 U V	5 U V
SW-053	09/20/89	10 U	10 U	10 U	10 U	5 U	4 JB	5 U	5 U	5 U
SW-053	10/12/89	10 U	10 U	10 U	10 U	5 U	10 U	5 U	5 U	5 U
SW-053	11/07/89	Data not yet received								
SW-053	12/15/89	Data not yet received								
SW-053	01/17/90	Data not yet received								
SW-053	02/13/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 53

Station Number	Date Sampled	Total-1,2-Dichloro ethene ug/l	Chloroform ug/l	1,2-Di-chloro ethane ug/l	2-Butanone ug/l	1,1,1-Tri chloro ethane ug/l	Carbon Tetra chloride ug/l	Vinyl Acetate ug/l	Bromo dichloro methane ug/l	1,2-Di-chloro propane ug/l
SW-053	07/21/87	5 U	5 U	5 U	NR	5 U	5 U	NR	NR	NR
SW-053	06/23/88	NR	5 U	5 U	10 U	5 U	5 U	10 U	5 U	5 U
SW-053	06/23/88	Insufficient Sample or Volatile Organic Analysis not requested.								
SW-053	04/05/89	27 V	5 U V	5 U V	10 U R	5 U V	5 U V	10 U V	5 U V	5 U V
SW-053	05/23/89	5 U V	5 U V	5 U V	10 U V	5 U V	5 U V	10 U V	5 U V	5 U V
SW-053	06/26/89	27 A	5 U A	5 U A	10 U R	5 U A	5 U A	10 U A	5 U A	5 U A
SW-053	07/19/89	DRY								
SW-053	08/15/89	5 U V	5 U V	5 U V	10 U V	5 U V	5 U V	10 U V	5 U V	5 U V
SW-053	09/20/89	5 U	5 U	5 U	10 U	5 U	5 U	10 U	5 U	5 U
SW-053	10/12/89	42	5 U	5 U	10 U	5 U	5 U	10 U	5 U	5 U
SW-053	11/07/89	Data not yet received								
SW-053	12/15/89	Data not yet received								
SW-053	01/17/90	Data not yet received								
SW-053	02/13/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 53

Station Number	Date Sampled	Cis-1,3-Dichloro propene ug/l	Trichloro ethene ug/l	Dibromo chloro methane ug/l	1,1,2-Tri chloro ethene ug/l	Benzene ug/l	Trans-1,3-Dichloro propene ug/l	Bromoform ug/l	4-Methyl-2-pentanone ug/l	2-Hexanone ug/l
SW-053	07/21/87	NR	5 U	NR	5 U	NR	NR	NR	NR	NR
SW-053	06/23/88	5 U	2 J	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-053	06/23/88	Insufficient Sample or Volatile Organic Analysis not requested.								
SW-053	04/05/89	5 U V	13 V	5 U V	5 U V	5 U A	5 U V	5 U V	10 U V	10 U V
SW-053	05/23/89	5 U V	2 J A	5 U V	5 U V	5 U A	5 U V	5 U V	10 U V	10 U V
SW-053	06/26/89	5 U A	5 U A	5 U A	5 U A	5 U A	5 U A	5 U A	10 U R	10 U R
SW-053	07/19/89	DRY								
SW-053	08/15/89	5 U V	5 U V	5 U V	5 U V	5 U A	5 U V	5 U V	10 U V	10 U V
SW-053	09/20/89	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-053	10/12/89	5 U	1 J	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-053	11/07/89	Data not yet received								
SW-053	12/15/89	Data not yet received								
SW-053	01/17/90	Data not yet received								
SW-053	02/13/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 53

Station Number	Date Sampled	Tetra chloro ethene ug/l	1,1,2,2-Tetrachloro ethane ug/l	Toluene ug/l	Chloro benzene ug/l	Ethyl benzene ug/l	Styrene ug/l	Total Xylenes ug/l
SW-053	07/21/87	5 U	NR	NR	NR	NR	NR	NR
SW-053	06/23/88	5 U	5 U	2 J	5 U	5 U	5 U	5 U
SW-053	06/23/88	Insufficient Sample or Volatile Organic Analysis not requested.						
SW-053	04/05/89	5 U V	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-053	05/23/89	5 U V	5 U V	2 J A	5 U A	5 U A	5 U A	5 U A
SW-053	06/26/89	5 U A	5 U A	5 U A	5 U A	5 U A	5 U	5 U
SW-053	07/19/89	DRY						
SW-053	08/15/89	5 U V	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-053	09/20/89	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SW-053	10/12/89	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SW-053	11/07/89	Data not yet received						
SW-053	12/15/89	Data not yet received						
SW-053	01/17/90	Data not yet received						
SW-053	02/13/90	Data not yet received						

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Chloro methane ug/l	Bromo methane ug/l	Vinyl Chloride ug/l	Chloro ethane ug/l	Methylene Chloride ug/l	Acetone ug/l	Carbon Disulfide ug/l	1,1-Di-chloro ethene ug/l	1,1-Di-chloro ethane ug/l
SW-056	07/21/87	NR	NR	NR	NR	NR	NR	NR	143	NR
SW-056	06/30/88	10 U	10 U	10 U	10 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U
SW-056	04/13/89	50 U A	50 U A	9 J A	50 U A	29 A	130 A	25 U A	25 U A	25 U A
SW-056	05/11/89	10 U V	10 U V	9 J A	10 U V	1 J A	10 U V	5 U V	1 J A	5 V
SW-056	06/07/89	10 U V	10 U V	15 V	10 U V	5 U V	10 U V	5 U V	1 J A	4 J A
SW-056	07/12/89	20 U	20 U	12 J	20 U	36 B	10 JB	10 U	10 U	6 J
SW-056	08/09/89	Data not yet received								
SW-056	09/14/89	20 U	20 U	20 U	20 U	10 U	20 U	10 U	10 U	10 U
SW-056	10/18/89	Data not yet received								
SW-056	11/15/89	Data not yet received								
SW-056	12/19/89	Data not yet received								
SW-056	01/25/90	Data not yet received								
SW-056	02/22/90	Data not yet received								
SW-056	03/21/90	Data not yet received								
SW-060	07/21/87	NR	NR	NR	NR	NR	NR	NR	5 U	NR
SW-060	11/11/87	10 U	10 U	10 U	10 U	44	10 U	5 U	5 U	5 U
SW-060	07/01/88	10 U	10 U	10 U	10 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U
SW-060	03/16/89	10 U V	10 U V	2 J A	10 U V	4 JB A	10 U V	5 U V	5 U V	5 U V
SW-060	03/16/89	10 U V	10 U V	10 U V	10 U V	3 JB A	3 J V	5 U V	5 U V	5 U V
SW-060	05/15/89	10 U V	10 U V	10 U V	10 U V	5 U V	10 U V	5 U V	5 U V	5 U V
SW-060	05/15/89	10 U V	10 U V	10 U V	10 U V	8 B A	10 U V	5 U V	5 U V	5 U V
SW-060	06/09/89	10 U V	10 U V	10 U V	10 U V	5 U V	10 U V	5 U V	5 U V	5 U V
SW-060	07/06/89	10 U V	10 U V	10 U V	10 U V	11 V	10 U V	5 U V	5 U V	5 U V
SW-060	08/03/89	Data not yet received								
SW-060	09/11/89	Data not yet received								
SW-060	09/11/89	Data not yet received								
SW-060	10/03/89	10 U	10 U	10 U	10 U	5 U	10 U	5 U	5 U	5 U
SW-060	11/06/89	Data not yet received								
SW-060	11/06/89	Data not yet received								
SW-060	12/06/89	Data not yet received								
SW-060	01/23/90	Data not yet received								
SW-060	02/09/90	Data not yet received								
SW-060	03/12/90	Data not yet received								
SW-061	07/22/87	NR	NR	NR	NR	NR	NR	NR	5 U	NR

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Total-1,2-Dichloro ethene ug/l	Chloroform ug/l	1,2-Di-chloro ethane ug/l	2-Butanone ug/l	1,1,1-Tri chloro ethane ug/l	Carbon Tetra chloride ug/l	Vinyl Acetate ug/l	Bromo dichloro methane ug/l	1,2-Di-chloro propane ug/l
SW-056	07/21/87	5 U	5 U	5 U	NR	5 U	5 U	NR	NR	NR
SW-056	06/30/88	NR	5.0 U	5.0 U	10 U	5.0 U	5.0 U	10 U	5.0 U	5.0 U
SW-056	04/13/89	25 U A	25 U A	25 U A	50 U R	25 U A	25 U A	50 U A	25 U A	25 U A
SW-056	05/11/89	5 U V	5 U V	5 U V	10 U V	9 V	3 J A	10 U R	5 U V	5 U V
SW-056	06/07/89	5 U V	5 U V	5 U V	10 U V	9 V	3 J A	10 U V	5 U V	5 U V
SW-056	07/12/89	10 U	10 U	10 U	20 U	8 J	3 J	20 U	10 U	10 U
SW-056	08/09/89	Data not yet received								
SW-056	09/14/89	10 U	10 U	10 U	20 U	10 U	10 U	20 U	10 U	10 U
SW-056	10/18/89	Data not yet received								
SW-056	11/15/89	Data not yet received								
SW-056	12/19/89	Data not yet received								
SW-056	01/25/90	Data not yet received								
SW-056	02/22/90	Data not yet received								
SW-056	03/21/90	Data not yet received								
SW-060	07/21/87	5 U	5 U	5 U	NR	5 U	173	NR	NR	NR
SW-060	11/11/87	5 U	10	5 U	10 U	5 U	145	10 U	5 U	5 U
SW-060	07/01/88	NR	5.0 U	5.0 U	10 U	5.0 U	46.5	10 U	5.0 U	5.0 U
SW-060	03/16/89	5 U V	14 V	5 U V	10 U V	5 U V	88 A	10 U V	5 U V	5 U V
SW-060	03/16/89	5 U V	12 V	5 U V	10 U V	5 U V	75 A	10 U V	5 U V	5 U V
SW-060	05/15/89	5 U V	9 V	5 U V	10 U V	12 V	92 V	10 U V	5 U V	5 U V
SW-060	05/15/89	5 U V	5 U V	5 U V	10 U V	5 U V	65 B V	10 U V	5 U V	5 U V
SW-060	06/09/89	5 U V	5 V	5 U V	10 U V	5 U V	74 V	10 U V	5 U V	5 U V
SW-060	07/06/89	5 U V	2 J A	5 U V	10 U V	5 U V	18 V	10 U V	5 U V	5 U V
SW-060	08/03/89	Data not yet received								
SW-060	09/11/89	Data not yet received								
SW-060	09/11/89	Data not yet received								
SW-060	10/03/89	5 U	1 J	5 U	10 U	5 U	21	10 U	5 U	5 U
SW-060	11/06/89	Data not yet received								
SW-060	11/06/89	Data not yet received								
SW-060	12/06/89	Data not yet received								
SW-060	01/23/90	Data not yet received								
SW-060	02/09/90	Data not yet received								
SW-060	03/12/90	Data not yet received								
SW-061	07/22/87	5 U	5 U	5 U	NR	33	5 U	NR	NR	NR

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Cis-1,3-Dichloro propene ug/l	Trichloro ethene ug/l	Dibromo chloro methane ug/l	1,1,2-Tri chloro ethane ug/l	Benzene ug/l	Trans-1,3-Dichloro propene ug/l	Bromoform ug/l	4-Methyl-2-penta none ug/l	2-Hexanone ug/l
SW-056	07/21/87	NR	50	NR	5 U	NR	NR	NR	NR	NR
SW-056	06/30/88	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U
SW-056	04/13/89	25 U A	120 A	25 U A	25 U A	25 U A	25 U A	25 U A	50 U A	50 U A
SW-056	05/11/89	5 U V	140 V	5 U V	5 U V	5 U A	5 U V	5 U V	10 U V	10 U V
SW-056	06/07/89	5 U V	130 V	5 U V	5 U V	5 U V	5 U V	5 U V	10 U V	10 U V
SW-056	07/12/89	10 U	140	10 U	10 U	10 U	10 U	10 U	20 U	20 U
SW-056	08/09/89	Data not yet received								
SW-056	09/14/89	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	20 U
SW-056	10/18/89	Data not yet received								
SW-056	11/15/89	Data not yet received								
SW-056	12/19/89	Data not yet received								
SW-056	01/25/90	Data not yet received								
SW-056	02/22/90	Data not yet received								
SW-056	03/21/90	Data not yet received								
SW-060	07/21/87	NR	5 U	NR	5 U	NR	NR	NR	NR	NR
SW-060	11/11/87	5 U	25	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-060	07/01/88	5.0 U	12.3	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U
SW-060	03/16/89	5 U V	15 V	5 U V	5 U V	5 U V	5 U V	5 U V	10 U V	10 U V
SW-060	03/16/89	5 U V	12 V	5 U V	5 U V	5 U V	5 U V	5 U V	10 U V	10 U V
SW-060	05/15/89	5 U V	31 V	5 U V	5 U V	5 U V	5 U V	5 U V	10 U V	10 U V
SW-060	05/15/89	5 U V	20 V	5 U V	5 U V	5 U A	5 U V	5 U R	10 U V	10 U V
SW-060	06/09/89	5 U V	13 V	5 U V	5 U V	5 U A	5 U V	5 U V	10 U V	10 U V
SW-060	07/06/89	5 U V	3 J A	5 U V	5 U V	5 U V	5 U V	5 U V	10 U V	10 U R
SW-060	08/03/89	Data not yet received								
SW-060	09/11/89	Data not yet received								
SW-060	09/11/89	Data not yet received								
SW-060	10/03/89	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-060	11/06/89	Data not yet received								
SW-060	11/06/89	Data not yet received								
SW-060	12/06/89	Data not yet received								
SW-060	01/23/90	Data not yet received								
SW-060	02/09/90	Data not yet received								
SW-060	03/12/90	Data not yet received								
SW-061	07/22/87	NR	6	NR	5 U	NR	NR	NR	NR	NR

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Tetra chloro ethene ug/l	1,1,2,2-Tetrachloro ethane ug/l	Toluene ug/l	Chloro benzene ug/l	Ethyl benzene ug/l	Styrene ug/l	Total Xylenes ug/l
SW-056	07/21/87	72	NR	NR	NR	NR	NR	NR
SW-056	06/30/88	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
SW-056	04/13/89	190	25 U A	25 U A	25 U A	25 U A	25 U A	25 U A
SW-056	05/11/89	200	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-056	06/07/89	190 V	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V
SW-056	07/12/89	280	10 U	10 U	10 U	10 U	10 U	10 U
SW-056	08/09/89	Data not yet received						
SW-056	09/14/89	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-056	10/18/89	Data not yet received						
SW-056	11/15/89	Data not yet received						
SW-056	12/19/89	Data not yet received						
SW-056	01/25/90	Data not yet received						
SW-056	02/22/90	Data not yet received						
SW-056	03/21/90	Data not yet received						
SW-060	07/21/87	5 U	NR	NR	NR	NR	NR	NR
SW-060	11/11/87	5 U	5 U	11	5 U	5 U	5 U	5 U
SW-060	07/01/88	10.3	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
SW-060	03/16/89	14 V	5 U V	1 J A	5 U V	5 U V	5 U V	5 U V
SW-060	03/16/89	11 V	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V
SW-060	05/15/89	35 V	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V
SW-060	05/15/89	23 V	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-060	06/09/89	18 V	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-060	07/06/89	3 J A	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V
SW-060	08/03/89	Data not yet received						
SW-060	09/11/89	Data not yet received						
SW-060	09/11/89	Data not yet received						
SW-060	10/03/89	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SW-060	11/06/89	Data not yet received						
SW-060	11/06/89	Data not yet received						
SW-060	12/06/89	Data not yet received						
SW-060	01/23/90	Data not yet received						
SW-060	02/09/90	Data not yet received						
SW-060	03/12/90	Data not yet received						
SW-061	07/22/87	5 U	NR	NR	NR	NR	NR	NR

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Chloro methane ug/l	Bromo methane ug/l	Vinyl Chloride ug/l	Chloro ethane ug/l	Methylene Chloride ug/l	Acetone ug/l	Carbon Disulfide ug/l	1,1-Di-chloro ethene ug/l	1,1-Di-chloro ethane ug/l
SW-061	11/11/87	10 U	10 U	10 U	10 U	20	10 U	5 U	5 U	5 U
SW-061	07/01/88	10 U	10 U	10 U	10 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U
SW-061	03/20/89	Data not yet received								
SW-061	05/15/89	10 U V	10 U V	2 J A	10 U V	5 U V	10 U V	5 U V	5 U V	5 U V
SW-061	06/09/89	10 U V	10 U V	2 J A	10 U V	5 U V	3 JB A	5 U V	5 U V	1 J A
SW-061	07/06/89	10 U V	10 U V	4 J A	10 U V	2 J A	10 U V	5 U V	5 U V	2 J A
SW-061	08/03/89	Data not yet received								
SW-061	09/11/89	Data not yet received								
SW-061	10/03/89	10 U	10 U	10 U	10 U	9 B	10 U	5 U	5 U	5 U
SW-061	10/20/89	DRY								
SW-061	11/06/89	Data not yet received								
SW-061	12/06/89	Data not yet received								
SW-061	01/23/90	Data not yet received								
SW-061	02/09/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-101	06/30/88	10 U	10 U	10 U	10 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U
SW-101	04/13/89	Data not yet received								
SW-101	05/11/89	10 U V	10 U V	10 U V	10 U V	3 J A	10 U V	5 U V	5 U V	5 U V
SW-101	06/07/89	10 U V	10 U V	10 U V	10 U V	5 U V	10 U V	5 U V	5 U V	5 U V
SW-101	07/12/89	10 U	10 U	10 U	10 U	2 J	10 U	5 U	5 U	5 U
SW-101	08/09/89	10 U V	10 U V	10 U V	10 U V	3 JB A	65 A	5 U V	5 U V	5 U V
SW-101	09/14/89	10 U	10 U	10 U	10 U	4 JB	10 U	5 U	5 U	5 U
SW-101	10/18/89	Data not yet received								
SW-101	11/15/89	Data not yet received								
SW-101	12/19/89	Data not yet received								
SW-101	01/25/90	Data not yet received								
SW-101	02/22/90	Data not yet received								
SW-101	03/21/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Total-1,2-Dichloro ethene ug/l	Chloroform ug/l	1,2-Di-chloro ethane ug/l	2-Butanone ug/l	1,1,1-Tri chloro ethane ug/l	Carbon Tetra chloride ug/l	Vinyl Acetate ug/l	Bromo dichloro methane ug/l	1,2-Di-chloro propane ug/l
SW-061	11/11/87	5 U	15	5 U	10 U	5 U	6	10 U	5 U	5 U
SW-061	07/01/88	NR	5.0 U	5.0 U	10 U	5.0 U	7.9	10 U	5.0 U	5.0 U
SW-061	03/20/89	Data not yet received								
SW-061	05/15/89	5 U V	3 J A	5 U V	10 U V	5 V	22 V	10 U V	5 U V	5 U V
SW-061	06/09/89	5 U V	3 J A	5 U V	10 U V	5 U V	33 V	10 U V	5 U V	5 U V
SW-061	07/06/89	5 U V	2 J A	5 U V	10 U V	5 U V	7 V	10 U V	5 U V	5 U V
SW-061	08/03/89	Data not yet received								
SW-061	09/11/89	Data not yet received								
SW-061	10/03/89	5 U	1 J	5 U	10 U	5 U	11	10 U	5 U	5 U
SW-061	10/20/89	DRY								
SW-061	11/06/89	Data not yet received								
SW-061	12/06/89	Data not yet received								
SW-061	01/23/90	Data not yet received								
SW-061	02/09/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-101	06/30/88	NR	79	5.0 U	10 U	5.0 U	5.0 U	10 U	5.0 U	5.0 U
SW-101	04/13/89	Data not yet received								
SW-101	05/11/89	5 U V	53 V	5 U V	10 U V	5 U V	5 U V	10 U R	2 J A	5 U V
SW-101	06/07/89	5 U V	66 V	5 U V	10 U V	5 U V	5 U V	10 U V	2 J A	5 U V
SW-101	07/12/89	5 U	67	5 U	10 U	5 U	5 U	10 U	2 J	5 U
SW-101	08/09/89	5 U V	57 V	5 U V	10 U R	5 U V	5 U V	10 U V	2 J A	5 U V
SW-101	09/14/89	5 U	38	5 U	10 U	5 U	5 U	10 U	2 J	5 U
SW-101	10/18/89	Data not yet received								
SW-101	11/15/89	Data not yet received								
SW-101	12/19/89	Data not yet received								
SW-101	01/25/90	Data not yet received								
SW-101	02/22/90	Data not yet received								
SW-101	03/21/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Cis-1,3-Dichloro propene ug/l	Trichloro ethene ug/l	Dibromo chloro methane ug/l	1,1,2-Tri chloro ethane ug/l	Benzene ug/l	Trans-1,3-Dichloro propene ug/l	Bromoform ug/l	4-Methyl-2-penta none ug/l	2-Hexanone ug/l
SW-061	11/11/87	5 U	70	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-061	07/01/88	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U
SW-061	03/20/89	Data not yet received								
SW-061	05/15/89	5 U V	15 V	5 U V	5 U V	5 U V	5 U V	5 U V	10 U V	10 U V
SW-061	06/09/89	5 U V	12 V	5 U V	5 U V	5 U A	5 U V	5 U V	10 U V	10 U V
SW-061	07/06/89	5 U V	3 J A	5 U V	5 U V	5 U V	5 U V	5 U V	10 U V	10 U R
SW-061	08/03/89	Data not yet received								
SW-061	09/11/89	Data not yet received								
SW-061	10/03/89	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-061	10/20/89	DRY								
SW-061	11/06/89	Data not yet received								
SW-061	12/06/89	Data not yet received								
SW-061	01/23/90	Data not yet received								
SW-061	02/09/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-101	06/30/88	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U
SW-101	04/13/89	Data not yet received								
SW-101	05/11/89	5 U V	5 V	5 U V	5 U V	5 U A	5 U V	5 U V	10 U V	10 U V
SW-101	06/07/89	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	10 U V	10 U V
SW-101	07/12/89	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-101	08/09/89	5 U V	5 U V	5 U V	5 U V	5 U A	5 U V	5 U V	10 U V	10 U V
SW-101	09/14/89	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-101	10/18/89	Data not yet received								
SW-101	11/15/89	Data not yet received								
SW-101	12/19/89	Data not yet received								
SW-101	01/25/90	Data not yet received								
SW-101	02/22/90	Data not yet received								
SW-101	03/21/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Tetra chloro ethene ug/l	1,1,2,2-Tetrachloro ethane ug/l	Toluene ug/l	Chloro benzene ug/l	Ethyl benzene ug/l	Styrene ug/l	Total Xylenes ug/l
SW-061	11/11/87	5 U	5 U	12	5 U	5 U	5 U	5 U
SW-061	07/01/88	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
SW-061	03/20/89	Data not yet received						
SW-061	05/15/89	10 V	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V
SW-061	06/09/89	11 V	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-061	07/06/89	2 J A	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V
SW-061	08/03/89	Data not yet received						
SW-061	09/11/89	Data not yet received						
SW-061	10/03/89	1 J	5 U	5 U	5 U	5 U	5 U	5 U
SW-061	10/20/89	DRY						
SW-061	11/06/89	Data not yet received						
SW-061	12/06/89	Data not yet received						
SW-061	01/23/90	Data not yet received						
SW-061	02/09/90	Data not yet received						
SW-061	03/12/90	Data not yet received						
SW-061	03/12/90	Data not yet received						
SW-101	06/30/88	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
SW-101	04/13/89	Data not yet received						
SW-101	05/11/89	14 V	5 U V	4 J A	5 U A	5 U A	5 U A	5 U A
SW-101	06/07/89	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V
SW-101	07/12/89	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SW-101	08/09/89	5 U V	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-101	09/14/89	2 J	5 U	5 U	5 U	5 U	5 U	5 U
SW-101	10/18/89	Data not yet received						
SW-101	11/15/89	Data not yet received						
SW-101	12/19/89	Data not yet received						
SW-101	01/25/90	Data not yet received						
SW-101	02/22/90	Data not yet received						
SW-101	03/21/90	Data not yet received						

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 59

Station Number	Date Sampled	Chloro methane ug/l	Bromo methane ug/l	Vinyl Chloride ug/l	Chloro ethane ug/l	Methylene Chloride ug/l	Acetone ug/l	Carbon Disulfide ug/l	1,1-Di-chloro ethene ug/l	1,1-Di-chloro ethane ug/l
SW-059	07/21/87	NR	NR	NR	NR	NR	NR	NR	133	NR
SW-059	07/01/88	10 U	10 U	10 U	10 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U
SW-059	03/20/89	50 U V	50 U V	50 U V	50 U V	20 JB A	50 U V	25 U V	9 J A	25 U V
SW-059	05/11/89	50 U V	50 U V	50 U V	50 U V	5 J A	50 U V	25 U V	7 J V	6 J V
SW-059	06/08/89	10 U V	10 U V	10 U V	10 U V	2 JB A	3 J A	5 U V	3 J A	2 J A
SW-059	07/06/89	10 U V	10 U V	10 U V	10 U V	9 B A	13 B A	5 U V	4 J A	3 J A
SW-059	08/10/89	Data not yet received								
SW-059	09/18/89	10 U	10 U	10 U	10 U	4 JB	3 JB	5 U	3 J	2 J
SW-059	10/03/89	10 U	10 U	10 U	10 U	5 U	10 U	5 U	4 J	5 U
SW-059	11/06/89	Data not yet received								
SW-059	12/06/89	Data not yet received								
SW-059	01/23/90	Data not yet received								
SW-059	02/09/90	Data not yet received								
SW-059	03/12/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 59

Station Number	Date Sampled	Total-1,2-Dichloro ethene ug/l	Chloroform ug/l	1,2-Di-chloro ethane ug/l	2-Butanone ug/l	1,1,1-Tri chloro ethane ug/l	Carbon Tetra chloride ug/l	Vinyl Acetate ug/l	Bromo dichloro methane ug/l	1,2-Di-chloro propane ug/l
SW-059	07/21/87	5 U	40	5 U	NR	5 U	605	NR	NR	NR
SW-059	07/01/88	NR	18.7	5.0 U	10 U	9.3	187	10 U	5.0 U	5.0 U
SW-059	03/20/89	25 U V	82 V	25 U V	50 U V	42 A	430 V	50 U V	25 U V	25 U V
SW-059	05/11/89	25 U V	66 V	25 U V	50 U V	36 V	310	50 U R	25 U V	25 U V
SW-059	06/08/89	5 U V	20 V	5 U V	10 U V	15 V	200 V	10 U V	5 U V	5 U V
SW-059	07/06/89	56 V	26 V	5 U V	10 U R	10 V	190 V	10 U V	5 U V	5 U V
SW-059	08/10/89	Data not yet received								
SW-059	09/18/89	5 U	23	5 U	10 U	9	190	10 U	5 U	5 U
SW-059	10/03/89	5 U	25	5 U	10 U	5 U	160	10 U	5 U	5 U
SW-059	11/06/89	Data not yet received								
SW-059	12/06/89	Data not yet received								
SW-059	01/23/90	Data not yet received								
SW-059	02/09/90	Data not yet received								
SW-059	03/12/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 59

Station Number	Date Sampled	Cis-1,3-Dichloro propene ug/l	Trichloro ethene ug/l	Dibromo chloro methane ug/l	1,1,2-Tri chloro ethane ug/l	Benzene ug/l	Trans-1,3-Dichloro propene ug/l	Bromoform ug/l	4-Methyl-2-pentanone ug/l	2-Hexanone ug/l
SW-059	07/21/87	NR	62	NR	5 U	NR	NR	NR	NR	NR
SW-059	07/01/88	5.0 U	49	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U
SW-059	03/20/89	25 U V	260 V	25 U V	25 U V	25 U A	25 U V	25 U V	50 U V	50 U V
SW-059	05/11/89	25 U V	180 V	25 U V	25 U V	25 U A	25 U V	25 U V	50 U V	50 U V
SW-059	06/08/89	5 U V	60 V	5 U V	5 U V	5 U V	5 U V	5 U V	10 U V	10 U V
SW-059	07/06/89	5 U V	55 V	5 U V	5 U V	5 U A	5 U V	5 U V	10 U R	10 U R
SW-059	08/10/89	Data not yet received								
SW-059	09/18/89	5 U	63	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-059	10/03/89	5 U	52	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-059	11/06/89	Data not yet received								
SW-059	12/06/89	Data not yet received								
SW-059	01/23/90	Data not yet received								
SW-059	02/09/90	Data not yet received								
SW-059	03/12/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 59

Station Number	Date Sampled	Tetra chloro ethene ug/l	1,1,2,2-Tetrachloro ethane ug/l	Toluene ug/l	Chloro benzene ug/l	Ethyl benzene ug/l	Styrene ug/l	Total Xylenes ug/l
SW-059	07/21/87	60	NR	NR	NR	NR	NR	NR
SW-059	07/01/88	45	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
SW-059	03/20/89	270 V	25 U V	25 U A	25 U A	25 U A	25 U A	25 U A
SW-059	05/11/89	170 V	25 U V	25 U A	25 U A	25 U A	25 U A	25 U A
SW-059	06/08/89	57 V	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V
SW-059	07/06/89	56 V	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-059	08/10/89	Data not yet received						
SW-059	09/18/89	53	5 U	5 U	5 U	5 U	5 U	5 U
SW-059	10/03/89	43	5 U	5 U	5 U	5 U	5 U	5 U
SW-059	11/06/89	Data not yet received						
SW-059	12/06/89	Data not yet received						
SW-059	01/23/90	Data not yet received						
SW-059	02/09/90	Data not yet received						
SW-059	03/12/90	Data not yet received						

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; M = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water
Volatile Organic Sampling Results

STATION 63

Station Number	Date Sampled	Chloro methane ug/l	Bromo methane ug/l	Vinyl Chloride ug/l	Chloro ethane ug/l	Methylene Chloride ug/l	Acetone ug/l	Carbon Disulfide ug/l	1,1-Di-chloro ethene ug/l	1,1-Di-chloro ethane ug/l
SW-063	07/24/87	NR	NR	NR	NR	NR	NR	NR	5 U	NR
SW-063	07/06/88	10 U	10 U	10 U	10 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U
SW-063	03/28/89	DRY								
SW-063	05/12/89	DRY								
SW-063	06/21/89	DRY								
SW-063	07/19/89	DRY								
SW-063	08/11/89	DRY								
SW-063	09/15/89	DRY								
SW-063	10/04/89	DRY								
SW-063	11/03/89	DRY								
SW-063	12/01/89	DRY								
SW-063	01/05/90	DRY								
SW-063	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 63

Station Number	Date Sampled	Total-1,2-Dichloro ethene ug/l	Chloroform ug/l	1,2-Di-chloro ethane ug/l	2-Butanone ug/l	1,1,1-Tri chloro ethane ug/l	Carbon Tetra chloride ug/l	Vinyl Acetate ug/l	Bromo dichloro methane ug/l	1,2-Di-chloro propane ug/l
SW-063	07/24/87	5 U	5 U	5 U	NR	5 U	5 U	NR	NR	NR
SW-063	07/06/88	NR	13	5.0 U	10 U	5.0 U	17	10 U	5.0 U	5.0 U
SW-063	03/28/89	DRY								
SW-063	05/12/89	DRY								
SW-063	06/21/89	DRY								
SW-063	07/19/89	DRY								
SW-063	08/11/89	DRY								
SW-063	09/15/89	DRY								
SW-063	10/04/89	DRY								
SW-063	11/03/89	DRY								
SW-063	12/01/89	DRY								
SW-063	01/05/90	DRY								
SW-063	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 63

Station Number	Date Sampled	Cis-1,3-Dichloro propene ug/l	Trichloro ethene ug/l	Dibromo chloro methane ug/l	1,1,2-Tri chloro ethane ug/l	Benzene ug/l	Trans-1,3-Dichloro propene ug/l	Bromoform ug/l	4-Methyl-2-penta none ug/l	2-Hexanone ug/l
SW-063	07/24/87	NR	5 U	NR	5 U	NR	NR	NR	NR	NR
SW-063	07/06/88	5.0 U	14	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U
SW-063	03/28/89	DRY								
SW-063	05/12/89	DRY								
SW-063	06/21/89	DRY								
SW-063	07/19/89	DRY								
SW-063	08/11/89	DRY								
SW-063	09/15/89	DRY								
SW-063	10/04/89	DRY								
SW-063	11/03/89	DRY								
SW-063	12/01/89	DRY								
SW-063	01/05/90	DRY								
SW-063	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water
Volatile Organic Sampling Results

STATION 63

Station Number	Date Sampled	Tetra chloro ethene ug/l	1,1,2,2-Tetrachloro ethane ug/l	Toluene ug/l	Chloro benzene ug/l	Ethyl benzene ug/l	Styrene ug/l	Total Xylenes ug/l
SW-063	07/24/87	5 U	NR	NR	NR	NR	NR	NR
SW-063	07/06/88	1.0 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
SW-063	03/28/89	DRY						
SW-063	05/12/89	DRY						
SW-063	06/21/89	DRY						
SW-063	07/19/89	DRY						
SW-063	08/11/89	DRY						
SW-063	09/15/89	DRY						
SW-063	10/04/89	DRY						
SW-063	11/03/89	DRY						
SW-063	12/01/89	DRY						
SW-063	01/05/90	DRY						
SW-063	02/02/90	DRY						

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value
J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 64

Station Number	Date Sampled	Chloro methane ug/l	Bromo methane ug/l	Vinyl Chloride ug/l	Chloro ethane ug/l	Methylene Chloride ug/l	Acetone ug/l	Carbon Disulfide ug/l	1,1-Di-chloro ethene ug/l	1,1-Di-chloro ethane ug/l
SW-064	07/22/87	NR	NR	NR	NR	NR	NR	NR	5 U	NR
SW-064	07/07/88	10 U	10 U	10 U	10 U	5 U	10 U	5 U	5 U	5 U
SW-064	03/30/89	DRY								
SW-064	05/22/89	10 U V	10 U V	10 U V	10 U V	9 B A	2 J A	5 U V	5 U V	5 U V
SW-064	06/27/89	10 U V	10 U V	10 U V	10 U V	5 U V	5 J A	6 V	5 U V	5 U V
SW-064	07/19/89	DRY								
SW-064	08/11/89	DRY								
SW-064	09/20/89	DRY								
SW-064	10/04/89	DRY								
SW-064	11/09/89	DRY								
SW-064	12/01/89	DRY								
SW-064	01/05/90	DRY								
SW-064	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value
J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 64

Station Number	Date Sampled	Total-1,2-Dichloro ethene ug/l	Chloroform ug/l	1,2-Di-chloro ethane ug/l	2-Butanone ug/l	1,1,1-Tri chloro ethane ug/l	Carbon Tetra chloride ug/l	Vinyl Acetate ug/l	Bromo dichloro methane ug/l	1,2-Di-chloro propane ug/l
SW-064	07/22/87	5 U	5 U	5 U	NR	5 U	5 U	NR	NR	NR
SW-064	07/07/88	NR	5 U	5 U	10 U	5 U	5 U	10 U	5 U	5 U
SW-064	03/30/89	DRY								
SW-064	05/22/89	5 U V	27 V	5 U V	10 U V	5 U V	3 J A	10 U V	5 U V	5 U V
SW-064	06/27/89	5 U V	1 J A	5 U V	10 U R	5 U V	5 U V	10 U V	5 U V	5 U V
SW-064	07/19/89	DRY								
SW-064	08/11/89	DRY								
SW-064	09/20/89	DRY								
SW-064	10/04/89	DRY								
SW-064	11/09/89	DRY								
SW-064	12/01/89	DRY								
SW-064	01/05/90	DRY								
SW-064	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 64

Station Number	Date Sampled	Cis-1,3-Dichloro propene ug/l	Trichloro ethene ug/l	Dibromo chloro methane ug/l	1,1,2-Tri chloro ethane ug/l	Benzene ug/l	Trans-1,3-Dichloro propene ug/l	Bromoform ug/l	4-Methyl-2-pentanone ug/l	2-Hexanone ug/l
SW-064	07/22/87	NR	20	NR	5 U	NR	NR	NR	NR	NR
SW-064	07/07/88	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-064	03/30/89	DRY								
SW-064	05/22/89	5 U V	16 V	5 U V	5 U V	5 U A	5 U V	5 U V	10 U V	10 U V
SW-064	06/27/89	5 U V	12 A	5 U V	5 U V	5 U A	5 U V	5 U V	10 U R	10 U R
SW-064	07/19/89	DRY								
SW-064	08/11/89	DRY								
SW-064	09/20/89	DRY								
SW-064	10/04/89	DRY								
SW-064	11/09/89	DRY								
SW-064	12/01/89	DRY								
SW-064	01/05/90	DRY								
SW-064	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; M = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 64

Station Number	Date Sampled	Tetra chloro ethene ug/l	1,1,2,2-Tetrachloro ethane ug/l	Toluene ug/l	Chloro benzene ug/l	Ethyl benzene ug/l	Styrene ug/l	Total Xylenes ug/l
SW-064	07/22/87	5 U	NR	NR	NR	NR	NR	NR
SW-064	07/07/88	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SW-064	03/30/89	DRY						
SW-064	05/22/89	5 U V	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-064	06/27/89	5 U V	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-064	07/19/89	DRY						
SW-064	08/11/89	DRY						
SW-064	09/20/89	DRY						
SW-064	10/04/89	DRY						
SW-064	11/09/89	DRY						
SW-064	12/01/89	DRY						
SW-064	01/05/90	DRY						
SW-064	02/02/90	DRY						

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 103

Station Number	Date Sampled	Chloro methane ug/l	Bromo methane ug/l	Vinyl Chloride ug/l	Chloro ethane ug/l	Methylene Chloride ug/l	Acetone ug/l	Carbon Disulfide ug/l	1,1-Di-chloro ethene ug/l	1,1-Di-chloro ethane ug/l
SW-103	07/11/88	10 U	10 U	10 U	10 U	5 U	10 U	5 U	5 U	5 U
SW-103	03/23/89	10 U V	10 U V	10 U V	10 U V	5 U V	10 U V	5 U V	5 U V	5 U V
SW-103	05/25/89	Data not yet received								
SW-103	06/15/89	10 U V	10 U V	10 U V	10 U V	5 U V	2 JB A	5 U V	5 U V	5 U V
SW-103	07/13/89	10 U V	10 U V	10 U V	10 U V	9 B A	10 U V	5 U V	5 U V	5 U V
SW-103	08/02/89	10 U V	10 U V	10 U V	10 U V	5 B A	10 U V	5 U V	5 U V	5 U V
SW-103	09/07/89	Data not yet received								
SW-103	10/03/89	10 U	10 U	10 U	10 U	9 B	10 U	5 U	5 U	5 U
SW-103	11/03/89	Data not yet received								
SW-103	12/06/89	Data not yet received								
SW-103	01/18/90	Data not yet received								
SW-103	02/12/90	Data not yet received								
SW-103	03/22/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 103

Station Number	Date Sampled	Total-1,2-Dichloro ethene ug/l	Chloroform ug/l	1,2-Di-chloro ethane ug/l	2-Butanone ug/l	1,1,1-Tri chloro ethane ug/l	Carbon Tetra chloride ug/l	Vinyl Acetate ug/l	Bromo dichloro methane ug/l	1,2-Di-chloro propane ug/l
SW-103	07/11/88	NR	5 U	5 U	10 U	5 U	9	10 U	5 U	5 U
SW-103	03/23/89	5 U V	5 U V	5 U V	10 U V	5 U V	10 V	10 U V	5 U V	5 U V
SW-103	05/25/89	Data not yet received								
SW-103	06/15/89	5 U V	5 U V	5 U V	10 U V	5 U V	7 V	10 U V	5 U V	5 U V
SW-103	07/13/89	5 U V	5 U V	5 U V	10 U V	5 U V	8 V	10 U V	5 U V	5 U V
SW-103	08/02/89	5 U V	5 U V	5 U V	10 U V	5 U V	7 V	10 U V	5 U V	5 U V
SW-103	09/07/89	Data not yet received								
SW-103	10/03/89	5 U	5 U	5 U	10 U	5 U	5 U	10 U	5 U	5 U
SW-103	11/03/89	Data not yet received								
SW-103	12/06/89	Data not yet received								
SW-103	01/18/90	Data not yet received								
SW-103	02/12/90	Data not yet received								
SW-103	03/22/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 103

Station Number	Date Sampled	Cis-1,3-Dichloro propene ug/l	Trichloro ethene ug/l	Dibromo chloro methane ug/l	1,1,2-Tri chloro ethane ug/l	Benzene ug/l	Trans-1,3-Dichloro propene ug/l	Bromoform ug/l	4-Methyl-2-pentanone ug/l	2-Hexanone ug/l
SW-103	07/11/88	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-103	03/23/89	5 U V	2 J A	5 U V	5 U V	5 U A	5 U V	5 U V	10 U V	10 U V
SW-103	05/25/89	Data not yet received								
SW-103	06/15/89	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V	10 U V	10 U V
SW-103	07/13/89	5 U V	1 J A	5 U V	5 U V	5 U V	5 U V	5 U R	10 U V	10 U R
SW-103	08/02/89	5 U V	1 J A	5 U V	5 U V	5 U V	5 U V	5 U V	10 U V	10 U V
SW-103	09/07/89	Data not yet received								
SW-103	10/03/89	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	10 U
SW-103	11/03/89	Data not yet received								
SW-103	12/06/89	Data not yet received								
SW-103	01/18/90	Data not yet received								
SW-103	02/12/90	Data not yet received								
SW-103	03/22/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Volatile Organic Sampling Results

STATION 103

Station Number	Date Sampled	Tetra chloro ethene ug/l	1,1,2,2-Tetrachloro ethane ug/l	Toluene ug/l	Chloro benzene ug/l	Ethyl benzene ug/l	Styrene ug/l	Total Xylenes ug/l
SW-103	07/11/88	2 J	5 U	5 U	5 U	5 U	5 U	5 U
SW-103	03/23/89	3 J A	5 U V	5 U A	5 U A	5 U A	5 U A	5 U A
SW-103	05/25/89	Data not yet received						
SW-103	06/15/89	1 J A	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V
SW-103	07/13/89	2 J A	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V
SW-103	08/02/89	2 J V	5 U V	5 U V	5 U V	5 U V	5 U V	5 U V
SW-103	09/07/89	Data not yet received						
SW-103	10/03/89	1 J	5 U	5 U	5 U	5 U	5 U	5 U
SW-103	11/03/89	Data not yet received						
SW-103	12/06/89	Data not yet received						
SW-103	01/18/90	Data not yet received						
SW-103	02/12/90	Data not yet received						
SW-103	03/22/90	Data not yet received						

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value
J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

APPENDIX B-2

SURFACE WATER SAMPLING RESULTS

DISSOLVED METALS

Surface Water

Dissolved Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Aluminum (Al), diss. mg/l	Antimony (Sb), diss. mg/l	Arsenic (As), diss. mg/l	Barium (Ba), diss. mg/l	Beryllium (Be), diss. mg/l	Cadmium (Cd), diss. mg/l	Calcium (Ca), diss. mg/l	Cesium (Cs), diss. mg/l	Chromium (Cr), diss. mg/l
SW-050	/ /	DRY								
SW-050	07/21/87	0.2 U	NR	NR	0.26	NR	NR	147	NR	0.01 U
SW-050	06/27/88	.282	.040 U	.010 U	.280	.005 U	.005 U	112	NR	.010 U
SW-050	06/27/88	Insufficient Sample or Dissolved Metals Analysis not requested.								
SW-050	04/17/89	DRY								
SW-050	05/10/89	DRY								
SW-050	06/27/89	.200 U V	.0600 U A	.0100 U A	.200 U V	.0050 U A	.0050 U A	120 A	1U V	.0100 U V
SW-050	07/18/89	.320 A	.0600 U V	.0100 U V	.255 V	.0050 U V	.0050 U V	116 V	1U V	.0100 U V
SW-050	08/11/89	DRY								
SW-050	09/12/89	DRY								
SW-050	10/04/89	DRY								
SW-050	11/03/89	DRY								
SW-050	12/01/89	DRY								
SW-050	01/05/90	DRY								
SW-050	02/02/90	DRY								
SW-050	03/17/90	DRY								
SW-051	07/21/87	0.2 U	NR	NR	0.21	NR	NR	103	NR	0.01 U
SW-051	06/23/88	DRY								
SW-051	04/17/89	DRY								
SW-051	05/10/89	DRY								
SW-051	06/27/89	.200 U V	.0600 U A	.0100 U V	.200 U V	.0050 U V	.0050 U A	98.60 A	1U V	.0100 U V
SW-051	07/18/89	DRY								
SW-051	08/11/89	DRY								
SW-051	09/12/89	DRY								
SW-051	10/04/89	DRY								
SW-051	11/03/89	DRY								
SW-051	12/01/89	DRY								
SW-051	01/05/90	DRY								
SW-051	02/02/90	DRY								
SW-052	07/21/87	0.2 U	NR	NR	0.2 U	NR	NR	110	NR	0.01 U
SW-052	06/23/88	.899	.040 U	.010 U	.20 U	.005 U	.005 U	91.5	NR	.010 U
SW-052	04/17/89	DRY								
SW-052	05/10/89	DRY								
SW-052	06/09/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Cobalt (Co), diss. mg/l	Copper (Cu), diss. mg/l	Iron (Fe), diss. mg/l	Lead (Pb), diss. mg/l	Lithium (Li), diss. mg/l	Magnesium (Mg), diss. mg/l	Manganese (Mn), diss. mg/l	Mercury (Hg), diss. mg/l	Molybdenum (Mo), diss. mg/l
SW-050	/ /	DRY								
SW-050	07/21/87	0.05 U	0.025 U	0.1 U	NR	NR	9.6	0.495	NR	0.04 U
SW-050	06/27/88	.050 U	.0279	.114	.005 U	NR	8.53	.0429	.0002 U	NR
SW-050	06/27/88	Insufficient Sample or Dissolved Metals Analysis not requested.								
SW-050	04/17/89	DRY								
SW-050	05/10/89	DRY								
SW-050	06/27/89	.0500 U V	.0250 U V	.100 U A	.0050 U R	.100 U A	8.43 V	.148 V	.0002 U V	.100 U A
SW-050	07/18/89	.0500 U V	.0250 U A	.552 A	.0050 U A	.100 U V	8.11 V	.161 V	.0002 V	.100 U V
SW-050	08/11/89	DRY								
SW-050	09/12/89	DRY								
SW-050	10/04/89	DRY								
SW-050	11/03/89	DRY								
SW-050	12/01/89	DRY								
SW-050	01/05/90	DRY								
SW-050	02/02/90	DRY								
SW-050	03/17/90	DRY								
SW-051	07/21/87	0.05 U	0.025 U	0.1 U	NR	NR	7.9	0.015 U	NR	0.04 U
SW-051	06/23/88	DRY								
SW-051	04/17/89	DRY								
SW-051	05/10/89	DRY								
SW-051	06/27/89	.0500 U V	.0250 U V	.100 U A	.0050 U R	.100 U A	7.54 V	.0150 U R	.0002 U V	.100 U A
SW-051	07/18/89	DRY								
SW-051	08/11/89	DRY								
SW-051	09/12/89	DRY								
SW-051	10/04/89	DRY								
SW-051	11/03/89	DRY								
SW-051	12/01/89	DRY								
SW-051	01/05/90	DRY								
SW-051	02/02/90	DRY								
SW-052	07/21/87	0.05 U	0.025 U	0.1 U	NR	NR	13.7	0.296	NR	0.04 U
SW-052	06/23/88	.050 U	.026	.58	.005 U	NR	13.6	.0181	.0002 U	NR
SW-052	04/17/89	DRY								
SW-052	05/10/89	DRY								
SW-052	06/09/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Nickel (Ni), diss. mg/l	Potassium (K), diss. mg/l	Selenium (Se), diss. mg/l	Silver (Ag), diss. mg/l	Sodium (Na), diss. mg/l	Strontium (Sr), diss. mg/l	Thallium (Tl), diss. mg/l	Tin (Sn), diss. mg/l	Vanadium (V), diss. mg/l
SW-050	/ /	DRY								
SW-050	07/21/87	0.04 U	NR	NR	0.01 U	9.5	0.43	NR	NR	0.05 U
SW-050	06/27/88	.040 U	5.21	.005 U	.010 U	8.55	.389	.10 U	NR	.050 U
SW-050	06/27/88	Insufficient Sample or Dissolved Metals Analysis not requested.								
SW-050	04/17/89	DRY								
SW-050	05/10/89	DRY								
SW-050	06/27/89	.0400 U A	5U R	.0050 U R	.0100 U A	8.06 V	1U V	.0100 U A	.100 U A	.0500 U V
SW-050	07/18/89	.0400 U V	5U V	.0050 U R	.0100 U R	7.04 V	1U V	.0100 U R	.100 U V	.0500 U A
SW-050	08/11/89	DRY								
SW-050	09/12/89	DRY								
SW-050	10/04/89	DRY								
SW-050	11/03/89	DRY								
SW-050	12/01/89	DRY								
SW-050	01/05/90	DRY								
SW-050	02/02/90	DRY								
SW-050	03/17/90	DRY								
SW-051	07/21/87	0.04 U	NR	NR	0.01 U	7.8	0.40	NR	NR	0.05 U
SW-051	06/23/88	DRY								
SW-051	04/17/89	DRY								
SW-051	05/10/89	DRY								
SW-051	06/27/89	.0400 U A	5U V	.0050 U R	.0100 U A	8.36 V	1U V	.0100 U A	.100 U A	.0500 U V
SW-051	07/18/89	DRY								
SW-051	08/11/89	DRY								
SW-051	09/12/89	DRY								
SW-051	10/04/89	DRY								
SW-051	11/03/89	DRY								
SW-051	12/01/89	DRY								
SW-051	01/05/90	DRY								
SW-051	02/02/90	DRY								
SW-052	07/21/87	0.04 U	NR	NR	0.01 U	48.0	0.49	NR	NR	0.05 U
SW-052	06/23/88	.040 U	5 U	.005 U	.010 U	44	.432	.10 U	NR	.050 U
SW-052	04/17/89	DRY								
SW-052	05/10/89	DRY								
SW-052	06/09/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Zinc (Zn), diss. mg/l
SW-050	/ /	DRY
SW-050	07/21/87	0.02 U
SW-050	06/27/88	.0361
SW-050	06/27/88	Insufficient Sample or Dissolved Metals Analysds not requesmted.
SW-050	04/17/89	DRY
SW-050	05/10/89	DRY
SW-050	06/27/89	.0200 U V
SW-050	07/18/89	.0200 U A
SW-050	08/11/89	DRY
SW-050	09/12/89	DRY
SW-050	10/04/89	DRY
SW-050	11/03/89	DRY
SW-050	12/01/89	DRY
SW-050	01/05/90	DRY
SW-050	02/02/90	DRY
SW-050	03/17/90	DRY
SW-051	07/21/87	0.02 U
SW-051	06/23/88	DRY
SW-051	04/17/89	DRY
SW-051	05/10/89	DRY
SW-051	06/27/89	.0200 U V
SW-051	07/18/89	DRY
SW-051	08/11/89	DRY
SW-051	09/12/89	DRY
SW-051	10/04/89	DRY
SW-051	11/03/89	DRY
SW-051	12/01/89	DRY
SW-051	01/05/90	DRY
SW-051	02/02/90	DRY
SW-052	07/21/87	0.02 U
SW-052	06/23/88	.0365
SW-052	04/17/89	DRY
SW-052	05/10/89	DRY
SW-052	06/09/89	DRY

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Aluminum (Al), diss. mg/l	Antimony (Sb), diss. mg/l	Arsenic (As), diss. mg/l	Barium (Ba), diss. mg/l	Beryllium (Be), diss. mg/l	Cadmium (Cd), diss. mg/l	Calcium (Ca), diss. mg/l	Cesium (Cs), diss. mg/l	Chromium (Cr), diss. mg/l
SW-052	07/07/89	DRY								
SW-052	08/11/89	DRY								
SW-052	09/28/89	DRY								
SW-052	10/04/89	DRY								
SW-052	11/03/89	DRY								
SW-052	12/01/89	DRY								
SW-052	01/05/90	DRY								
SW-052	02/02/90	DRY								
SW-052	03/17/90	DRY								
SW-055	07/21/87	0.2 U	NR	NR	0.24	NR	NR	126	NR	0.01 U
SW-055	07/21/87	Insufficient Sample or Dissolved Metals Analysis not requested.								
SW-055	06/22/88	.796	.040 U	.010 U	.315	.005 U	.005 U	132	NR	.010 U
SW-055	04/17/89	.200 U V	.0600 U A	.0100 U V	.213 V	.0050 U A	.0050 U V	91.70 V	1U V	.0100 U A
SW-055	05/25/89	Data not yet received								
SW-055	06/28/89	.200 U V	.0600 U A	.0100 U A	.224 V	.0050 U A	.0050 U A	109 A	1U V	.0100 U V
SW-055	07/18/89	.200 U A	.0600 U V	.0100 U V	.315 V	.0050 U V	.0050 U V	128 V	1U V	.0100 U V
SW-055	08/16/89	.200 U A	.0600 U V	.0100 U R	.302 V	.0050 U V	.0050 U A	129 V	1U V	.0100 U V
SW-055	09/20/89	.200 U R	.0600 U V	.0100 U V	.343 V	.0050 U R	.0050 U A	145 A	1U R	.0100 U A
SW-055	10/19/89	.0300 U V	.500 U A	.0020 U V	.252 V	.0020 U R	.0040 U A	117 V	.0010 U V	.0200 U A
SW-055	11/09/89	.200 U	.0600 U	.0100 U	.273	.0050 U	.0050 U	121	1U	.0100 U
SW-055	12/07/89	Data not yet received								
SW-055	01/16/90	Data not yet received								
SW-055	02/23/90	Data not yet received								
SW-055	03/15/90	Data not yet received								
SW-057	07/21/87	0.2 U	NR	NR	0.6	NR	NR	156	NR	0.01 U
SW-057	06/23/88	DRY								
SW-057	04/17/89	DRY								
SW-057	05/10/89	DRY								
SW-057	06/09/89	DRY								
SW-057	07/07/89	DRY								
SW-057	08/11/89	DRY								
SW-057	09/16/89	DRY								
SW-057	10/04/89	DRY								
SW-057	11/03/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Cobalt (Co), diss. mg/l	Copper (Cu), diss. mg/l	Iron (Fe), diss. mg/l	Lead (Pb), diss. mg/l	Lithium (Li), diss. mg/l	Magnesium (Mg), diss. mg/l	Manganese (Mn), diss. mg/l	Mercury (Hg), diss. mg/l	Molybdenum (Mo), diss. mg/l
SW-052	07/07/89	DRY								
SW-052	08/11/89	DRY								
SW-052	09/28/89	DRY								
SW-052	10/04/89	DRY								
SW-052	11/03/89	DRY								
SW-052	12/01/89	DRY								
SW-052	01/05/90	DRY								
SW-052	02/02/90	DRY								
SW-052	03/17/90	DRY								
SW-055	07/21/87	0.05 U	0.025 U	0.1 U	NR	NR	19.7	0.022	NR	0.04 U
SW-055	07/21/87	Insufficient Sample or Dissolved Metals Analysis not requested.								
SW-055	06/22/88	.050 U	.025 U	1.06	.005 U	NR	27.3	.24	.0002 U	NR
SW-055	04/17/89	.0500 U V	.0250 U A	.128 A	.0050 U A	.0795 A	20 V	.374 V	.0002 U A	.0201
SW-055	05/25/89	Data not yet received								
SW-055	06/28/89	.0500 U V	.0250 U A	.100 U A	.0050 U V	.100 U A	18.10 V	.0740 V	.0002 U V	.100 U A
SW-055	07/18/89	.0500 U V	.0250 U A	.100 U A	.0050 U A	.155 V	26.40 V	.470 V	.0002 U V	.100 U V
SW-055	08/16/89	.0500 U V	.0250 U A	.100 U A	.0030 U A	.179 A	26.30 V	.383 V	.0002 U V	.100 U V
SW-055	09/20/89	.0500 U V	.0250 U V	.100 U A	.0050 U A	.116 A	28.30 V	.262 A	.0003 V	.100 U A
SW-055	10/19/89	.0200 U V	.0200 U A	.0554 A	.0020 U A	.175 A	23.20 V	.245 V	.0002 U A	.500 U A
SW-055	11/09/89	.0500 U	.0250 U	.100 U	.0050 U	.161	25.70	.260	.0002 U	.100 U
SW-055	12/07/89	Data not yet received								
SW-055	01/16/90	Data not yet received								
SW-055	02/23/90	Data not yet received								
SW-055	03/15/90	Data not yet received								
SW-057	07/21/87	0.05 U	0.025 U	0.1 U	NR	NR	21.9	0.381	NR	0.04 U
SW-057	06/23/88	DRY								
SW-057	04/17/89	DRY								
SW-057	05/10/89	DRY								
SW-057	06/09/89	DRY								
SW-057	07/07/89	DRY								
SW-057	08/11/89	DRY								
SW-057	09/16/89	DRY								
SW-057	10/04/89	DRY								
SW-057	11/03/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Nickel (Ni), diss. mg/l	Potassium (K), diss. mg/l	Selenium (Se), diss. mg/l	Silver (Ag), diss. mg/l	Sodium (Na), diss. mg/l	Strontium (Sr), diss. mg/l	Thallium (Tl), diss. mg/l	Tin (Sn), diss. mg/l	Vanadium (V), diss. mg/l
SW-052	07/07/89	DRY								
SW-052	08/11/89	DRY								
SW-052	09/28/89	DRY								
SW-052	10/04/89	DRY								
SW-052	11/03/89	DRY								
SW-052	12/01/89	DRY								
SW-052	01/05/90	DRY								
SW-052	02/02/90	DRY								
SW-052	03/17/90	DRY								
SW-055	07/21/87	0.04 U	NR	NR	0.01 U	35.2	0.73	NR	NR	0.05 U
SW-055	07/21/87	Insufficient Sample or Dissolved Metals Analysis not requested.								
SW-055	06/22/88	.040 U	5 U	.005 U	.010 U	71.6	.918	.010 U	NR	.050 U
SW-055	04/17/89	.0400 U V	5U A	.0050 U A	.0100 U V	41.90 V	1U A	.0100 U R	.100 U V	.0500 U V
SW-055	05/25/89	Data not yet received								
SW-055	06/28/89	.0400 U A	5U A	.0050 U R	.0100 U A	34.20 V	1U V	.0100 U A	.100 U A	.0500 U V
SW-055	07/18/89	.0400 U V	5U A	.0050 U R	.0100 U A	63.90 V	1U V	.0400 U R	.100 U V	.0500 U V
SW-055	08/16/89	.0400 U V	5U A	.0050 U A	.0100 U A	55.40 A	1U V	.100 U R	.100 U V	.0500 U R
SW-055	09/20/89	.0400 U R	5U A	.0050 U R	.0100 U A	88.50 A	1U R	.0400 U A	.100 U A	.0500 U A
SW-055	10/19/89	.0200 U R	2.42 A	.0020 U A	.0300 U R	66.80 V	.789 V	.0030 U V	1U A	.0100 U V
SW-055	11/09/89	.0400 U	5U	.0050 U	.0100 U	68.60	1U	.0100 U	.100 U	.0500 U
SW-055	12/07/89	Data not yet received								
SW-055	01/16/90	Data not yet received								
SW-055	02/23/90	Data not yet received								
SW-055	03/15/90	Data not yet received								
SW-057	07/21/87	0.04 U	NR	NR	0.01 U	20.7	0.79	NR	NR	0.05 U
SW-057	06/23/88	DRY								
SW-057	04/17/89	DRY								
SW-057	05/10/89	DRY								
SW-057	06/09/89	DRY								
SW-057	07/07/89	DRY								
SW-057	08/11/89	DRY								
SW-057	09/16/89	DRY								
SW-057	10/04/89	DRY								
SW-057	11/03/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water
Dissolved Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Zinc (Zn), diss. mg/l
SW-052	07/07/89	DRY
SW-052	08/11/89	DRY
SW-052	09/28/89	DRY
SW-052	10/04/89	DRY
SW-052	11/03/89	DRY
SW-052	12/01/89	DRY
SW-052	01/05/90	DRY
SW-052	02/02/90	DRY
SW-052	03/17/90	DRY
SW-055	07/21/87	0.14
SW-055	07/21/87	Insufficient Sample or Dissolved Metals Analysis not requested.
SW-055	06/22/88	.536
SW-055	04/17/89	1.26 V
SW-055	05/25/89	Data not yet received
SW-055	06/28/89	.551 V
SW-055	07/18/89	.290 A
SW-055	08/16/89	.989 V
SW-055	09/20/89	.893 A
SW-055	10/19/89	.881 A
SW-055	11/09/89	1.10
SW-055	12/07/89	Data not yet received
SW-055	01/16/90	Data not yet received
SW-055	02/23/90	Data not yet received
SW-055	03/15/90	Data not yet received
SW-057	07/21/87	0.02 U
SW-057	06/23/88	DRY
SW-057	04/17/89	DRY
SW-057	05/10/89	DRY
SW-057	06/09/89	DRY
SW-057	07/07/89	DRY
SW-057	08/11/89	DRY
SW-057	09/16/89	DRY
SW-057	10/04/89	DRY
SW-057	11/03/89	DRY

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water
Dissolved Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Aluminum (Al), diss. mg/l	Antimony (Sb), diss. mg/l	Arsenic (As), diss. mg/l	Barium (Ba), diss. mg/l	Beryllium (Be), diss. mg/l	Cadmium (Cd), diss. mg/l	Calcium (Ca), diss. mg/l	Cesium (Cs), diss. mg/l	Chromium (Cr), diss. mg/l
SW-057	12/01/89	DRY								
SW-057	01/05/90	DRY								
SW-057	02/02/90	DRY								
SW-057	03/17/90	DRY								
SW-058	07/21/87	0.2 U	NR	NR	0.2 U	NR	NR	113	NR	0.01 U
SW-058	06/23/88	.20 U	.040 U	.010 U	.236	.005 U	.005 U	106	NR	.010 U
SW-058	04/17/89	DRY								
SW-058	05/10/89	DRY								
SW-058	06/28/89	.200 U A	.0600 U V	.0100 U V	.204 V	.0050 U A	.0050 U V	101 V	.100 U V	.0100 U V
SW-058	07/14/89	DRY								
SW-058	08/11/89	DRY								
SW-058	09/20/89	DRY								
SW-058	10/04/89	DRY								
SW-058	11/20/89	DRY								
SW-058	12/01/89	DRY								
SW-058	01/05/90	DRY								
SW-058	02/02/90	DRY								
SW-077	06/22/88	.669	.040 U	.010 U	.255	.005 U	.005 U	110	NR	.010 U
SW-077	03/30/89	DRY								
SW-077	05/11/89	DRY								
SW-077	06/27/89	.200 U A	.0600 U A	.0100 U R	.200 U V	.0050 U V	.0050 U V	116 V	.100 U V	.0100 U A
SW-077	07/18/89	DRY								
SW-077	08/16/89	.200 U A	.0600 U V	.0100 U R	.200 U V	.0050 U V	.0050 U A	72.30 V	1U V	.0100 U V
SW-077	09/20/89	DRY								
SW-077	10/04/89	DRY								
SW-077	11/09/89	DRY								
SW-077	12/01/89	DRY								
SW-077	01/05/90	DRY								
SW-077	02/02/90	DRY								
SW-077	03/16/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water
Dissolved Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Cobalt (Co), diss. mg/l	Copper (Cu), diss. mg/l	Iron (Fe), diss. mg/l	Lead (Pb), diss. mg/l	Lithium (Li), diss. mg/l	Magnesium (Mg), diss. mg/l	Manganese (Mn), diss. mg/l	Mercury (Hg), diss. mg/l	Molybdenum (Mo), diss. mg/l
SW-057	12/01/89	DRY								
SW-057	01/05/90	DRY								
SW-057	02/02/90	DRY								
SW-057	03/17/90	DRY								
SW-058	07/21/87	0.05 U	0.025 U	0.1 U	NR	NR	13.8	0.031	NR	0.04 U
SW-058	06/23/88	.050 U	.025 U	.10 U	.005 U	NR	18.90	.0819	.0002 U	NR
SW-058	04/17/89	DRY								
SW-058	05/10/89	DRY								
SW-058	06/28/89	.0500 U V	.0250 U A	.100 U A	.0050 U A	.100 U V	11.50 V	.0150 U V	.0002 U V	.100 U V
SW-058	07/14/89	DRY								
SW-058	08/11/89	DRY								
SW-058	09/20/89	DRY								
SW-058	10/04/89	DRY								
SW-058	11/20/89	DRY								
SW-058	12/01/89	DRY								
SW-058	01/05/90	DRY								
SW-058	02/02/90	DRY								
SW-077	06/22/88	.050 U	.025 U	1.48	.0126	NR	22.6	1.64	.0002 U	NR
SW-077	03/30/89	DRY								
SW-077	05/11/89	DRY								
SW-077	06/27/89	.0500 U V	.0250 U V	.100 U A	.0050 U A	.100 U V	23.90 V	.0525 V	.0002 U V	.100 U V
SW-077	07/18/89	DRY								
SW-077	08/16/89	.0500 U V	.0250 U A	.100 U A	.0030 U A	.100 U V	13.70 V	.256 V	.0003 V	.100 U V
SW-077	09/20/89	DRY								
SW-077	10/04/89	DRY								
SW-077	11/09/89	DRY								
SW-077	12/01/89	DRY								
SW-077	01/05/90	DRY								
SW-077	02/02/90	DRY								
SW-077	03/16/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Nickel (Ni), diss. mg/l	Potassium (K), diss. mg/l	Selenium (Se), diss. mg/l	Silver (Ag), diss. mg/l	Sodium (Na), diss. mg/l	Strontium (Sr), diss. mg/l	Thallium (Tl), diss. mg/l	Tin (Sn), diss. mg/l	Vanadium (V), diss. mg/l
SW-057	12/01/89	DRY								
SW-057	01/05/90	DRY								
SW-057	02/02/90	DRY								
SW-057	03/17/90	DRY								
SW-058	07/21/87	0.04 U	NR	NR	0.01 U	11.6	0.59	NR	NR	0.05 U
SW-058	06/23/88	.040 U	5 U	.005 U	.010 U	15.60	.718	.10 U	NR	.050 U
SW-058	04/17/89	DRY								
SW-058	05/10/89	DRY								
SW-058	06/28/89	.0400 U V	5U R	.0050 U A	.0100 U V	9.26 V	.478 V	.0100 U A	.100 U V	.0500 U V
SW-058	07/14/89	DRY								
SW-058	08/11/89	DRY								
SW-058	09/20/89	DRY								
SW-058	10/04/89	DRY								
SW-058	11/20/89	DRY								
SW-058	12/01/89	DRY								
SW-058	01/05/90	DRY								
SW-058	02/02/90	DRY								
SW-077	06/22/88	.040 U	5 U	.005 U	.010 U	54.1	.562	.010 U	NR	.050 U
SW-077	03/30/89	DRY								
SW-077	05/11/89	DRY								
SW-077	06/27/89	.0400 U V	5U A	.0134 V	.0100 U A	43.40 V	.591 A	.0100 U A	.100 U V	.0500 U V
SW-077	07/18/89	DRY								
SW-077	08/16/89	.0400 U V	9.00 V	.0500 U V	.0100 U A	23.60 A	1U V	.0100 U R	.100 U V	.0500 U R
SW-077	09/20/89	DRY								
SW-077	10/04/89	DRY								
SW-077	11/09/89	DRY								
SW-077	12/01/89	DRY								
SW-077	01/05/90	DRY								
SW-077	02/02/90	DRY								
SW-077	03/16/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water
Dissolved Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Zinc (Zn), diss. mg/l	
SW-057	12/01/89	DRY	
SW-057	01/05/90	DRY	
SW-057	02/02/90	DRY	
SW-057	03/17/90	DRY	
SW-058	07/21/87	0.02 U	
SW-058	06/23/88	.0256	
SW-058	04/17/89	DRY	
SW-058	05/10/89	DRY	
SW-058	06/28/89	.0209	A
SW-058	07/14/89	DRY	
SW-058	08/11/89	DRY	
SW-058	09/20/89	DRY	
SW-058	10/04/89	DRY	
SW-058	11/20/89	DRY	
SW-058	12/01/89	DRY	
SW-058	01/05/90	DRY	
SW-058	02/02/90	DRY	
SW-077	06/22/88	.0671	
SW-077	03/30/89	DRY	
SW-077	05/11/89	DRY	
SW-077	06/27/89	.0286	A
SW-077	07/18/89	DRY	
SW-077	08/16/89	.0354	A
SW-077	09/20/89	DRY	
SW-077	10/04/89	DRY	
SW-077	11/09/89	DRY	
SW-077	12/01/89	DRY	
SW-077	01/05/90	DRY	
SW-077	02/02/90	DRY	
SW-077	03/16/90	Data not yet received	

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 53

Station Number	Date Sampled	Aluminum (Al), diss. mg/l	Antimony (Sb), diss. mg/l	Arsenic (As), diss. mg/l	Barium (Ba), diss. mg/l	Beryllium (Be), diss. mg/l	Cadmium (Cd), diss. mg/l	Calcium (Ca), diss. mg/l	Cesium (Cs), diss. mg/l	Chromium (Cr), diss. mg/l
SW-053	07/21/87	0.2 U	NR	NR	0.2 U	NR	NR	80.0	NR	0.01 U
SW-053	06/23/88	.245	.040 U	.010 U	.325	.005 U	.005 U	115	NR	.010 U
SW-053	06/23/88	Insufficient Sample or Dissolved Metals Analysis not requested.								
SW-053	04/05/89	.200 U	.0600 U	.0100 U	.200 U	.0050 U	.0050 U	88.80	1U	.0100 U
SW-053	05/23/89	.200 U V	.0600 U A	.0100 U A	.200 U V	.0050 U V	.0050 U R	104 A	1U V	.0100 U A
SW-053	06/26/89	.200 U A	.0600 U V	.0100 U A	.200 U V	.0050 U A	.0050 U V	119 V	.100 U V	.0100 U V
SW-053	07/19/89	DRY								
SW-053	08/15/89	.200 U A	.0600 U V	.0100 U A	.228 V	.0050 U V	.0050 U A	140 V	1U V	.0100 U V
SW-053	09/20/89	.200 U R	.133 A	.0100 U V	.207 V	.0050 U A	.0050 U V	127 A	1U R	.0100 U A
SW-053	10/12/89	.200 U A	.0600 U V	.0100 U V	.200 U V	.0050 U V	.0050 U V	137 V	2.50 U V	.0100 U V
SW-053	11/07/89	Data not yet received								
SW-053	12/15/89	Data not yet received								
SW-053	01/17/90	Data not yet received								
SW-053	02/13/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 53

Station Number	Date Sampled	Cobalt (Co), diss. mg/l	Copper (Cu), diss. mg/l	Iron (Fe), diss. mg/l	Lead (Pb), diss. mg/l	Lithium (Li), diss. mg/l	Magnesium (Mg), diss. mg/l	Manganese (Mn), diss. mg/l	Mercury (Hg), diss. mg/l	Molybdenum (Mo), diss. mg/l
SW-053	07/21/87	0.05 U	0.025 U	0.1 U	NR	NR	26.4	0.087	NR	0.04 U
SW-053	06/23/88	.050 U	.0274	.23	.005 U	NR	32.2	.706	.0002 U	NR
SW-053	06/23/88	Insufficient Sample or Dissolved Metals Analysis not requested.								
SW-053	04/05/89	.0500 U	.0250 U	.780	.0050 U	NR	24.70	.378	.0002 U	NR
SW-053	05/23/89	.0500 U A	.0250 U A	2.66 A	.0050 U A	.0232 A	27.70 A	.587 A	.0002 U V	.0100 U A
SW-053	06/26/89	.0500 U V	.0250 U A	.673 V	.0050 U A	.100 U V	30.50 V	.458 V	.0002 U V	.100 U V
SW-053	07/19/89	DRY								
SW-053	08/15/89	.0500 U V	.0250 U A	8.54 V	.0030 U A	.100 U V	26.40 V	.538 V	.0002 U V	.100 U V
SW-053	09/20/89	.0500 U V	.0250 U V	3.69 A	.0050 U A	.100 U R	21.50 V	.436 A	.0002 U V	.100 U A
SW-053	10/12/89	.0500 U V	.0250 U V	2.78 V	.0030 U A	.100 U V	24.30 V	.406 A	.0002 U V	.100 U V
SW-053	11/07/89	Data not yet received								
SW-053	12/15/89	Data not yet received								
SW-053	01/17/90	Data not yet received								
SW-053	02/13/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 53

Station Number	Date Sampled	Nickel (Ni), diss. mg/l	Potassium (K), diss. mg/l	Selenium (Se), diss. mg/l	Silver (Ag), diss. mg/l	Sodium (Na), diss. mg/l	Strontium (Sr), diss. mg/l	Thallium (Tl), diss. mg/l	Tin (Sn), diss. mg/l	Vanadium (V), diss. mg/l
SW-053	07/21/87	0.04 U	NR	NR	0.01 U	113	0.69	NR	NR	0.05 U
SW-053	06/23/88	.040 U	6.36	.005 U	.010 U	20.30	.817	.10 U	NR	.050 U
SW-053	06/23/88	Insufficient Sample or Dissolved Metals Analysis not requested.								
SW-053	04/05/89	.0400 U	5U	.0050 U	.0100 U	19.20	NR	.0100 U	NR	.0500 U
SW-053	05/23/89	.0400 U R	5U A	.0050 U R	.0100 U A	19.60 V	1U V	.0100 U R	.100 U A	.0500 U A
SW-053	06/26/89	.0400 U V	5U V	.0050 U A	.0100 U V	17.40 V	.789 V	.0100 U V	.100 U V	.0500 U V
SW-053	07/19/89	DRY								
SW-053	08/15/89	.0400 U V	5U V	.0050 U V	.0100 U A	14.30	1U V	.100 U R	.100 U V	.0500 U V
SW-053	09/20/89	.0400 U R	5U R	.0050 U R	.0100 U A	15.40 A	1U R	.0100 U A	.100 U A	.0500 U A
SW-053	10/12/89	.0400 U V	5U R	.0050 U A	.0100 U V	17.50 V	.746 A	.0100 U A	.100 U V	.0500 U V
SW-053	11/07/89	Data not yet received								
SW-053	12/15/89	Data not yet received								
SW-053	01/17/90	Data not yet received								
SW-053	02/13/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 53

Station Number	Date Sampled	Zinc (Zn), diss. mg/l		
SW-053	07/21/87	0.02	U	
SW-053	06/23/88	.0368		
SW-053	06/23/88	Insufficient Sample or Dissolved Metals Analysis not requested.		
SW-053	04/05/89	.0200	U	
SW-053	05/23/89	.0200	U	R
SW-053	06/26/89	.0371		A
SW-053	07/19/89	DRY		
SW-053	08/15/89	.0200	U	R
SW-053	09/20/89	.0200	U	A
SW-053	10/12/89	.0204		A
SW-053	11/07/89	Data not yet received		
SW-053	12/15/89	Data not yet received		
SW-053	01/17/90	Data not yet received		
SW-053	02/13/90	Data not yet received		

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Aluminum (Al), diss. mg/l	Antimony (Sb), diss. mg/l	Arsenic (As), diss. mg/l	Barium (Ba), diss. mg/l	Beryllium (Be), diss. mg/l	Cadmium (Cd), diss. mg/l	Calcium (Ca), diss. mg/l	Cesium (Cs), diss. mg/l	Chromium (Cr), diss. mg/l
SW-056	07/21/87	0.2 U	NR	NR	0.22	NR	NR	137	NR	0.01 U
SW-056	06/30/88	0.200 U	0.060 U	0.010 U	0.200 U	0.005 U	0.005 U	128	NR	0.010 U
SW-056	04/13/89	.200 U V	.0600 U A	.0100 U R	.235 V	.0053 A	.0050 U R	133 V	1U V	.0100 U A
SW-056	05/11/89	.200 U R	.0600 U A	.0100 U V	.209 V	.0050 U A	.0050 U R	109 V	1U V	.0100 U V
SW-056	06/07/89	.200 U A	.0600 U V	.0100 U A	.200 U A	.0050 U V	.0050 U V	115 A	.100 U V	.0100 U V
SW-056	07/12/89	Data not yet received								
SW-056	08/09/89	.200 U	.0600 U	.0100 U	.232	.0050 U	.0050 U	121	1U	.0100 U
SW-056	09/14/89	.200 U R	.0600 U	.0100 U V	.211 V	.0050 U A	.0050 U V	109 A	1U A	.0100 U R
SW-056	10/18/89	Data not yet received								
SW-056	11/15/89	Data not yet received								
SW-056	12/19/89	Data not yet received								
SW-056	01/25/90	Data not yet received								
SW-056	02/22/90	Data not yet received								
SW-056	03/21/90	Data not yet received								
SW-060	07/21/87	0.2 U	NR	NR	0.2 U	NR	NR	114	NR	0.01 U
SW-060	11/11/87	Insufficient Sample or Dissolved Metals Analysis not requested.								
SW-060	07/01/88	0.200 U	0.060 U	0.010 U	0.200 U	0.005 U	0.005 U	105	NR	0.010 U
SW-060	03/16/89	.200 U R	.0600 U R	.0100 U A	.200 U A	.0050 U A	.0050 U R	90.60 V	1U V	.0100 U R
SW-060	03/16/89	.200 U R	.0600 U A	.0100 U V	.200 U A	.0050 U A	.0050 U R	84.30 V	1U V	.0100 U V
SW-060	05/15/89	.200 U R	.0600 U V	.0100 U V	.200 U V	.0050 U A	.0050 U R	70.90 V	1U V	.0100 U V
SW-060	05/15/89	.200 U R	.0600 U V	.0100 U A	.200 U V	.0050 U A	.0050 U R	70.70 V	1U V	.0100 U V
SW-060	06/09/89	.200 U V	.0600 U V	.0100 U V	.200 U A	.0050 U A	.0050 U R	94.30 A	1U V	.0100 U R
SW-060	07/06/89	.200 U A	.0600 U V	.0100 U A	.200 V	.0050 U V	.0050 U V	113 V	1U V	.0100 U V
SW-060	08/03/89	.200 U V	.0600 U A	.0100 U V	.200 U V	.0050 U R	.0050 U V	98.90 V	1U V	.0100 U V
SW-060	09/11/89	Data not yet received								
SW-060	09/11/89	Data not yet received								
SW-060	10/03/89	.0300 U V	.500 U V	.0020 U V	.186 V	.0020 U V	.0040 U V	99.40 V	.0010 U V	.0200 U V
SW-060	11/06/89	Data not yet received								
SW-060	11/06/89	Data not yet received								
SW-060	12/06/89	Data not yet received								
SW-060	01/23/90	Data not yet received								
SW-060	02/09/90	Data not yet received								
SW-060	03/12/90	Data not yet received								
SW-061	07/22/87	0.2 U	NR	NR	0.2 U	NR	NR	30.1	NR	0.01 U

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
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DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Cobalt (Co), diss. mg/l	Copper (Cu), diss. mg/l	Iron (Fe), diss. mg/l	Lead (Pb), diss. mg/l	Lithium (Li), diss. mg/l	Magnesium (Mg), diss. mg/l	Manganese (Mn), diss. mg/l	Mercury (Hg), diss. mg/l	Molybdenum (Mo), diss. mg/l
SW-056	07/21/87	0.05 U	0.025 U	0.1 U	NR	NR	21.1	0.227	NR	0.04 U
SW-056	06/30/88	0.050 U	0.025 U	0.100 U	0.005 U	NR	23	0.015 U	0.0007	NR
SW-056	04/13/89	.0500 U V	.0250 U A	.137 A	.0050 U V	.0183 V	21.10 V	.643 A	.0004 V	.0245 A
SW-056	05/11/89	.0500 U A	.0250 U A	.100 U V	.0250 U A	.0100 U V	19.30 V	.165 V	.0002 U R	.0100 U V
SW-056	06/07/89	.0500 U V	.0250 U A	.100 U A	.0050 U A	.100 U R	18.80 A	.438 A	.0002 U V	.100 U V
SW-056	07/12/89	Data not yet received								
SW-056	08/09/89	.0500 U	.0250 U	.100 U	.0050 U	.100 U	22	.550	.0002 U	.100 U
SW-056	09/14/89	.0500 U V	.0250 U V	.100 U V	.0050 U A	.100 U V	19.40 V	.484 V	.0002 U V	.100 U V
SW-056	10/18/89	Data not yet received								
SW-056	11/15/89	Data not yet received								
SW-056	12/19/89	Data not yet received								
SW-056	01/25/90	Data not yet received								
SW-056	02/22/90	Data not yet received								
SW-056	03/21/90	Data not yet received								
SW-060	07/21/87	0.05 U	0.025 U	0.1 U	NR	NR	17.2	0.015 U	NR	0.04 U
SW-060	11/11/87	Insufficient Sample or Dissolved Metals Analysis not requested.								
SW-060	07/01/88	0.050 U	0.025 U	0.100 U	0.005 U	NR	17	0.015 U	0.0002 U	NR
SW-060	03/16/89	.0500 U A	.0250 U V	.100 U V	.0050 U A	.100 U V	15.30 V	.0150 U A	.0002 U V	.100 U V
SW-060	03/16/89	.0500 U A	.0250 U V	.100 U V	.0050 U A	.100 U V	14.60 V	.0150 U A	.0002 U V	.100 U V
SW-060	05/15/89	.0500 U A	.0250 U A	.100 U A	.0050 U A	.0100 U V	12.60 V	.0246 V	.0002 U R	.0100 U V
SW-060	05/15/89	.0500 U A	.0250 U R	.100 U R	.0050 U A	.0100 U V	12.70 V	.0240 V	.0002 U R	.0100 U V
SW-060	06/09/89	.0500 U R	.0250 U R	.100 U V	.0050 U V	.100 U V	13.70 A	.0245 V	.0002 U V	.100 U V
SW-060	07/06/89	.0500 U V	.0250 U A	.100 U A	.0050 U V	.100 U A	16 V	.0150 U V	.0002 U A	.100 U A
SW-060	08/03/89	.0500 U V	.0250 U R	.100 U V	.0050 U A	.100 U V	16.80	.0150 U A	.0002 U V	.100 U V
SW-060	09/11/89	Data not yet received								
SW-060	09/11/89	Data not yet received								
SW-060	10/03/89	.0200 U V	.0200 U V	.0302 A	.0054 A	.0200 A	16.50 V	.0100 U A	.0002 U A	.500 U V
SW-060	11/06/89	Data not yet received								
SW-060	11/06/89	Data not yet received								
SW-060	12/06/89	Data not yet received								
SW-060	01/23/90	Data not yet received								
SW-060	02/09/90	Data not yet received								
SW-060	03/12/90	Data not yet received								
SW-061	07/22/87	0.05 U	0.025 U	0.18	NR	NR	5.0 U	0.047	NR	0.04 U

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DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Nickel (Ni), diss. mg/l	Potassium (K), diss. mg/l	Selenium (Se), diss. mg/l	Silver (Ag), diss. mg/l	Sodium (Na), diss. mg/l	Strontium (Sr), diss. mg/l	Thallium (Tl), diss. mg/l	Tin (Sn), diss. mg/l	Vanadium (V), diss. mg/l
SW-056	07/21/87	0.04 U	NR	NR	0.01 U	60.5	0.67	NR	NR	0.05 U
SW-056	06/30/88	0.040 U	5.0 U	0.005 U	0.010 U	56	0.8	0.010 U	NR	0.050 U
SW-056	04/13/89	.0400 U R	5U A	.0050 U A	.0100 U V	53.70 V	1U V	.0100 U R	.100 U V	.0500 U V
SW-056	05/11/89	.0400 U R	5U R	.0050 U A	.0100 U A	53 V	1U V	.0100 U A	.100 U V	.0500 U V
SW-056	06/07/89	.0400 U A	5U A	.0050 U A	.0100 U A	49.70 V	.574 A	.0100 U A	.100 U V	.0500 U V
SW-056	07/12/89	Data not yet received								
SW-056	08/09/89	.0400 U	5U	.0050 U	.0100 U	57.60	1U	.0100 U	.100 U	.0500 U
SW-056	09/14/89	.0400 U R	5U R	.0050 U A	.0100 U A	47.20 V	1U V	.0100 U V	.100 U V	.0500 U V
SW-056	10/18/89	Data not yet received								
SW-056	11/15/89	Data not yet received								
SW-056	12/19/89	Data not yet received								
SW-056	01/25/90	Data not yet received								
SW-056	02/22/90	Data not yet received								
SW-056	03/21/90	Data not yet received								
SW-060	07/21/87	0.04 U	NR	NR	0.01 U	36.8	0.58	NR	NR	0.05 U
SW-060	11/11/87	Insufficient Sample or Dissolved Metals Analysis not requested.								
SW-060	07/01/88	0.040 U	5.0 U	0.005 U	0.010 U	26	0.6	0.010 U	NR	0.050 U
SW-060	03/16/89	.0400 U A	5U A	.0050 U A	.0100 U A	30 V	.544 V	.0100 U A	.100 U V	.0500 U V
SW-060	03/16/89	.0400 U A	5U A	.0050 U A	.0100 U A	29.50 V	.509 V	.0100 U A	.100 U V	.0500 U V
SW-060	05/15/89	.0400 U R	5U R	.0050 U A	.0100 U A	30.20 V	1U V	.0400 U A	.100 U V	.0500 U V
SW-060	05/15/89	.0400 U R	5U R	.0050 U A	.0100 U A	30.80 V	1U V	.0400 U A	.100 U V	.0500 U V
SW-060	06/09/89	.0400 U A	5U A	.0050 U A	.0100 U A	26.80 V	1U V	.0100 U A	.100 U V	.0500 U A
SW-060	07/06/89	.0400 U A	5U V	.0050 U R	.0100 U R	27.20 V	1U A	.0500 U R	.100 U A	.0500 U V
SW-060	08/03/89	.0400 U V	5U V	.0050 U A	.0100 U V	33.10 V	1U V	.0100 U A	.100 U V	.0500 U V
SW-060	09/11/89	Data not yet received								
SW-060	09/11/89	Data not yet received								
SW-060	10/03/89	.0200 U V	.589 A	.0020 U V	.0300 U V	29.30 V	.547 V	.0030 U R	1 V	.0100 U V
SW-060	11/06/89	Data not yet received								
SW-060	11/06/89	Data not yet received								
SW-060	12/06/89	Data not yet received								
SW-060	01/23/90	Data not yet received								
SW-060	02/09/90	Data not yet received								
SW-060	03/12/90	Data not yet received								
SW-061	07/22/87	0.04 U	NR	NR	0.01 U	17.9	0.02 U	NR	NR	0.05 U

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
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DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water
Dissolved Metals Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Zinc (Zn), diss. mg/l		
SW-056	07/21/87	0.27		
SW-056	06/30/88	0.020		
SW-056	04/13/89	.0241		A
SW-056	05/11/89	.0200	U	R
SW-056	06/07/89	.0993		A
SW-056	07/12/89	Data not yet received		
SW-056	08/09/89	.0200	U	
SW-056	09/14/89	.0357		A
SW-056	10/18/89	Data not yet received		
SW-056	11/15/89	Data not yet received		
SW-056	12/19/89	Data not yet received		
SW-056	01/25/90	Data not yet received		
SW-056	02/22/90	Data not yet received		
SW-056	03/21/90	Data not yet received		
SW-060	07/21/87	0.59		
SW-060	11/11/87	Insufficient Sample or Diesolved Metals Analysis not requested.		
SW-060	07/01/88	0.400		
SW-060	03/16/89	.373		V
SW-060	03/16/89	.363		V
SW-060	05/15/89	.248		A
SW-060	05/15/89	.195		A
SW-060	06/09/89	.400		V
SW-060	07/06/89	.161		A
SW-060	08/03/89	.158		V
SW-060	09/11/89	Data not yet received		
SW-060	09/11/89	Data not yet received		
SW-060	10/03/89	.238		V
SW-060	11/06/89	Data not yet received		
SW-060	11/06/89	Data not yet received		
SW-060	12/06/89	Data not yet received		
SW-060	01/23/90	Data not yet received		
SW-060	02/09/90	Data not yet received		
SW-060	03/12/90	Data not yet received		
SW-061	07/22/87	0.05		

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water
Dissolved Metals Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Aluminum (Al), diss. mg/l	Antimony (Sb), diss. mg/l	Arsenic (As), diss. mg/l	Barium (Ba), diss. mg/l	Beryllium (Be), diss. mg/l	Cadmium (Cd), diss. mg/l	Calcium (Ca), diss. mg/l	Cesium (Cs), diss. mg/l	Chromium (Cr), diss. mg/l
SW-061	11/11/87	Insufficient Sample or Dissolved Metals Analysis not requested.								
SW-061	07/01/88	0.200 U	0.060 U	0.010 U	0.200 U	0.005 U	0.005 U	94	NR	0.010 U
SW-061	03/20/89	.200 U V	.0600 U R	.0100 U V	.200 U V	.0050 U R	.0050 U R	27 V	1U V	.0100 U V
SW-061	05/15/89	.200 U R	.0600 U A	.0100 U V	.200 U V	.0050 U A	.0050 U R	60.10 V	1U V	.0100 U V
SW-061	06/09/89	.200 U V	.0600 U V	.0100 U A	.200 U A	.0050 U A	.0050 U R	87.40 A	1U V	.0100 U R
SW-061	07/06/89	.200 U A	.0600 U V	.0100 U V	.200 U V	.0050 U V	.0050 U V	90.90 V	1U V	.0100 U V
SW-061	08/03/89	.200 U V	.0600 U A	.0100 U V	.200 U A	.0050 U V	.0050 U V	87.10 V	1U V	.0100 U R
SW-061	09/11/89	Data not yet received								
SW-061	10/03/89	.0300 U V	.500 U V	.0020 U V	.163 V	.0020 U V	.0040 U V	86.50 V	.0010 U V	.0200 U V
SW-061	10/20/89	DRY								
SW-061	11/06/89	Data not yet received								
SW-061	12/06/89	Data not yet received								
SW-061	01/23/90	Data not yet received								
SW-061	02/09/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-101	06/30/88	0.200 U	0.060 U	0.010 U	0.200 U	0.005 U	0.005 U	12	NR	0.010 U
SW-101	04/13/89	Data not yet received								
SW-101	05/11/89	.200 U R	.0600 U A	.0100 U V	.200 U V	.0050 U A	.0050 U R	9.37 V	1U V	.0100 U A
SW-101	06/07/89	.200 U A	.0600 U V	.0100 U V	.200 U A	.0050 U V	.0050 U V	10.10 A	.100 U V	.0100 U V
SW-101	07/12/89	Data not yet received								
SW-101	08/09/89	Data not yet received								
SW-101	09/14/89	.200 U V	.0600 U A	.0100 U V	.200 U V	.0050 U A	.0050 U V	7.72 A	1U A	.0100 U R
SW-101	10/18/89	Data not yet received								
SW-101	11/15/89	Data not yet received								
SW-101	12/19/89	Data not yet received								
SW-101	01/25/90	Data not yet received								
SW-101	02/22/90	Data not yet received								
SW-101	03/21/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Cobalt (Co), diss. mg/l	Copper (Cu), diss. mg/l	Iron (Fe), diss. mg/l	Lead (Pb), diss. mg/l	Lithium (Li), diss. mg/l	Magnesium (Mg), diss. mg/l	Manganese (Mn), diss. mg/l	Mercury (Hg), diss. mg/l	Molybdenum (Mo), diss. mg/l
SW-061	11/11/87	Insufficient Sample or Dissolved Metals Analysis not requested.								
SW-061	07/01/88	0.050 U	0.025 U	0.100 U	0.005 U	NR	18	0.015 U	0.0002 U	NR
SW-061	03/20/89	.0500 U A	.0250 U V	.100 U V	.0050 U A	.100 U V	5.61 V	.0167 V	.0002 U V	.100 U V
SW-061	05/15/89	.0500 U A	.0250 U A	.100 U R	.0050 U A	.0100 U V	11.20 V	.0382 V	.0002 U R	.0100 U V
SW-061	06/09/89	.0500 U R	.0250 U R	.100 U V	.0050 U A	.100 U V	14.40 A	.0345 V	.0002 U V	.100 U V
SW-061	07/06/89	.0500 U V	.0250 U A	.100 U A	.0050 U A	.100 U A	16.60 V	.0310 V	.0002 U A	.100 U A
SW-061	08/03/89	.0500 U V	.0250 U R	.100 U R	.0050 U A	.100 U V	16.20 V	.0615 V	.0002 U V	.100 U V
SW-061	09/11/89	Data not yet received								
SW-061	10/03/89	.0200 U V	.0200 U V	.123 A	.0020 U V	.0200 A	16.40 V	.0507 V	.0002 U A	.500 U V
SW-061	10/20/89	DRY								
SW-061	11/06/89	Data not yet received								
SW-061	12/06/89	Data not yet received								
SW-061	01/23/90	Data not yet received								
SW-061	02/09/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-101	06/30/88	0.050 U	0.025 U	0.2	0.005 U	NR	5.0 U	0.015 U	0.0007	NR
SW-101	04/13/89	Data not yet received								
SW-101	05/11/89	.0500 U A	.0250 U R	.100 U R	.0250 U A	.0100 U V	5U V	.0150 U V	.0002 U R	.0100 U V
SW-101	06/07/89	.0500 U V	.0250 U A	.115 A	.0050 U A	.100 U R	5U A	.0150 U A	.0002 U V	.100 U V
SW-101	07/12/89	Data not yet received								
SW-101	08/09/89	Data not yet received								
SW-101	09/14/89	.0500 U V	.0250 U V	.100 U V	.0050 U A	.100 U V	5U V	.0150 U V	.0002 U V	.100 U V
SW-101	10/18/89	Data not yet received								
SW-101	11/15/89	Data not yet received								
SW-101	12/19/89	Data not yet received								
SW-101	01/25/90	Data not yet received								
SW-101	02/22/90	Data not yet received								
SW-101	03/21/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Nickel (Ni), diss. mg/l	Potassium (K), diss. mg/l	Selenium (Se), diss. mg/l	Silver (Ag), diss. mg/l	Sodium (Na), diss. mg/l	Strontium (Sr), diss. mg/l	Thallium (Tl), diss. mg/l	Tin (Sn), diss. mg/l	Vanadium (V), diss. mg/l
SW-061	11/11/87	Insufficient Sample or Dissolved Metals Analysis not requested.								
SW-061	07/01/88	0.040 U	5.0 U	0.005 U	0.010 U	30	0.7	0.010 U	NR	0.050 U
SW-061	03/20/89	.0400 U R	5U A	.0050 U A	.0100 U V	43.50 V	.201 V	.0100 U R	.100 U V	.0500 U V
SW-061	05/15/89	.0400 U R	5U A	.0050 A	.0100 U A	30.50 V	1U V	.0400 U A	.100 U V	.0500 U V
SW-061	06/09/89	.0400 U A	5U A	.0050 U V	.0100 U A	29 V	1U V	.0100 U V	.100 U V	.0500 U A
SW-061	07/06/89	.0400 U A	5U V	.0050 U R	.0100 U R	28.50 V	1U A	.0100 U R	.100 U A	.0500 U V
SW-061	08/03/89	.0400 U V	5U V	.0050 U A	.0100 U V	32.20 V	1U V	.0100 U A	.100 U V	.0500 U V
SW-061	09/11/89	Data not yet received								
SW-061	10/03/89	.0200 U V	1.12 A	.0020 U V	.0300 U V	30.80 V	.517 V	.0030 U V	1U V	.0100 U V
SW-061	10/20/89	DRY								
SW-061	11/06/89	Data not yet received								
SW-061	12/06/89	Data not yet received								
SW-061	01/23/90	Data not yet received								
SW-061	02/09/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-101	06/30/88	0.040 U	5.0 U	0.005 U	0.010 U	7	0.200 U	0.010 U	NR	0.050 U
SW-101	04/13/89	Data not yet received								
SW-101	05/11/89	.0400 U R	5U R	.0050 U A	.0100 U A	5.65 V	1U V	.0100 U A	.100 U V	.0500 U V
SW-101	06/07/89	.0400 U V	5U A	.0050 U V	.0100 U A	5.76 V	.100 U V	.0100 U V	.100 U V	.0500 U V
SW-101	07/12/89	Data not yet received								
SW-101	08/09/89	Data not yet received								
SW-101	09/14/89	.0400 U R	5U R	.0050 U A	.0100 U A	5U V	1U V	.0100 U V	.100 U V	.0500 U V
SW-101	10/18/89	Data not yet received								
SW-101	11/15/89	Data not yet received								
SW-101	12/19/89	Data not yet received								
SW-101	01/25/90	Data not yet received								
SW-101	02/22/90	Data not yet received								
SW-101	03/21/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Zinc (Zn), diss. mg/l		
SW-061	11/11/87	Insufficient Sample or Dissolved Metals Analysis not requested.		
SW-061	07/01/88	0.100		
SW-061	03/20/89	.0664		A
SW-061	05/15/89	.0200		A
SW-061	06/09/89	.181		V
SW-061	07/06/89	.0200	U	A
SW-061	08/03/89	.0837		V
SW-061	09/11/89	Data not yet received		
SW-061	10/03/89	.0347		A
SW-061	10/20/89	DRY		
SW-061	11/06/89	Data not yet received		
SW-061	12/06/89	Data not yet received		
SW-061	01/23/90	Data not yet received		
SW-061	02/09/90	Data not yet received		
SW-061	03/12/90	Data not yet received		
SW-061	03/12/90	Data not yet received		
SW-101	06/30/88	0.010		
SW-101	04/13/89	Data not yet received		
SW-101	05/11/89	.0200	U	R
SW-101	06/07/89	.0267		A
SW-101	07/12/89	Data not yet received		
SW-101	08/09/89	Data not yet received		
SW-101	09/14/89	.0315		A
SW-101	10/18/89	Data not yet received		
SW-101	11/15/89	Data not yet received		
SW-101	12/19/89	Data not yet received		
SW-101	01/25/90	Data not yet received		
SW-101	02/22/90	Data not yet received		
SW-101	03/21/90	Data not yet received		

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 59

Station Number	Date Sampled	Aluminum (Al), diss. mg/l	Antimony (Sb), diss. mg/l	Arsenic (As), diss. mg/l	Barium (Ba), diss. mg/l	Beryllium (Be), diss. mg/l	Cadmium (Cd), diss. mg/l	Calcium (Ca), diss. mg/l	Cesium (Cs), diss. mg/l	Chromium (Cr), diss. mg/l
SW-059	07/21/87	0.2 U	NR	NR	0.2 U	NR	NR	122	NR	0.01 U
SW-059	07/01/88	0.200 U	0.060 U	0.010 U	0.200 U	0.005 U	0.005 U	108	NR	0.010 U
SW-059	03/20/89	.200 U R	.0600 U A	.0100 U A	.200 U V	.0050 U R	.0050 U R	112 V	1U V	.0100 U R
SW-059	05/11/89	.200 U R	.0600 U A	.0100 U V	.200 U V	.0050 U R	.0050 U R	88.30 V	1U V	.0100 U V
SW-059	06/08/89	.200 U A	.0600 U A	.0100 U R	.200 U V	.0050 U A	.0050 U V	109 V	.100 U V	.0100 U V
SW-059	07/06/89	.200 U A	.0600 U A	.0100 U R	.200 U V	.0050 U V	.0050 U V	114 V	.100 U V	.0100 U R
SW-059	08/10/89	Data not yet received								
SW-059	09/18/89	.200 U V	.0600 U A	.0100 U V	.200 V	.0050 U A	.0050 U V	118 V	1U V	.0100 U V
SW-059	10/03/89	.0300 U R	.500 U V	.0020 U V	.162 V	.0020 U V	.0040 U V	100 V	.0010 U V	.0200 U V
SW-059	11/06/89	Data not yet received								
SW-059	12/06/89	Data not yet received								
SW-059	01/23/90	Data not yet received								
SW-059	02/09/90	Data not yet received								
SW-059	03/12/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value
J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 59

Station Number	Date Sampled	Cobalt (Co), diss. mg/l	Copper (Cu), diss. mg/l	Iron (Fe), diss. mg/l	Lead (Pb), diss. mg/l	Lithium (Li), diss. mg/l	Magnesium (Mg), diss. mg/l	Manganese (Mn), diss. mg/l	Mercury (Hg), diss. mg/l	Molybdenum (Mo), diss. mg/l
SW-059	07/21/87	0.05 U	0.025 U	0.1 U	NR	NR	24.4	0.015 U	NR	0.04 U
SW-059	07/01/88	0.050 U	0.025 U	0.100 U	0.005 U	NR	20	0.015 U	0.0002 U	NR
SW-059	03/20/89	.0500 U V	.0250 U V	.100 U V	.0250 U A	.100 U V	29.10 V	.0194 A	.0007 A	.100 U V
SW-059	05/11/89	.0500 U A	.0250 U A	.123 V	.0250 U A	.0142 V	23.20 V	.0369 V	.0002 U R	.0100 U V
SW-059	06/08/89	.0500 U V	.0288 A	.100 U A	.0050 U R	.100 U A	20.30 V	.0150 U A	.0002 U V	.100 U V
SW-059	07/06/89	.0500 U V	.0250 U V	.100 U A	.0050 U A	.100 U V	22.80 V	.0461 V	.0002 U V	.100 U V
SW-059	08/10/89	Data not yet received								
SW-059	09/18/89	.0500 U V	.0250 U V	.100 U V	.0050 U V	.100 U A	25.30 V	.0150 U A	.0002 U V	.100 U A
SW-059	10/03/89	.0200 U V	.0200 U V	.0361 A	.0020 U V	.0250 A	21.70 V	.0100 U V	.0002 U A	.500 U V
SW-059	11/06/89	Data not yet received								
SW-059	12/06/89	Data not yet received								
SW-059	01/23/90	Data not yet received								
SW-059	02/09/90	Data not yet received								
SW-059	03/12/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 59

Station Number	Date Sampled	Nickel (Ni), diss. mg/l	Potassium (K), diss. mg/l	Selenium (Se), diss. mg/l	Silver (Ag), diss. mg/l	Sodium (Na), diss. mg/l	Strontium (Sr), diss. mg/l	Thallium (Tl), diss. mg/l	Tin (Sn), diss. mg/l	Vanadium (V), diss. mg/l
SW-059	07/21/87	0.04 U	NR	NR	0.01 U	38.2	0.73	NR	NR	0.05 U
SW-059	07/01/88	0.040 U	5.0 U	0.005 U	0.010 U	28	0.7	0.010 U	NR	0.050 U
SW-059	03/20/89	.0400 U V	5U A	.0050 U A	.0100 U V	36.90 V	1.17 V	.0100 U R	.100 U V	.0500 U V
SW-059	05/11/89	.0400 U R	5U R	.0050 U A	.0100 U A	38.30 V	1U V	.0100 U A	.100 U V	.0500 U V
SW-059	06/08/89	.0400 U V	5U R	.0050 U A	.0100 U V	32.10 V	.614 A	.0100 U V	.100 U V	.0500 U V
SW-059	07/06/89	.0400 U V	5U R	.0050 U A	.0100 U A	31.40 V	.644 A	.0100 U A	.100 U V	.0500 U V
SW-059	08/10/89	Data not yet received								
SW-059	09/18/89	.0400 U R	5U R	.0050 U R	.0100 U V	35.40 V	1U A	.0400 U V	.100 U A	.0500 U V
SW-059	10/03/89	.0200 U V	.750 A	.0020 U V	.0300 U V	30.40 V	.642 V	.0030 U V	1U V	.0100 U V
SW-059	11/06/89	Data not yet received								
SW-059	12/06/89	Data not yet received								
SW-059	01/23/90	Data not yet received								
SW-059	02/09/90	Data not yet received								
SW-059	03/12/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 59

Station Number	Date Sampled	Zinc (Zn), diss. mg/l	
SW-059	07/21/87	0.31	
SW-059	07/01/88	0.200	
SW-059	03/20/89	.626	A
SW-059	05/11/89	.0200	A
SW-059	06/08/89	.119	V
SW-059	07/06/89	.0763	V
SW-059	08/10/89	Data not yet received	
SW-059	09/18/89	.232	V
SW-059	10/03/89	.186	V
SW-059	11/06/89	Data not yet received	
SW-059	12/06/89	Data not yet received	
SW-059	01/23/90	Data not yet received	
SW-059	02/09/90	Data not yet received	
SW-059	03/12/90	Data not yet received	

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 63

Station Number	Date Sampled	Aluminum (Al), diss. mg/l	Antimony (Sb), diss. mg/l	Arsenic (As), diss. mg/l	Barium (Ba), diss. mg/l	Beryllium (Be), diss. mg/l	Cadmium (Cd), diss. mg/l	Calcium (Ca), diss. mg/l	Cesium (Cs), diss. mg/l	Chromium (Cr), diss. mg/l
SW-063	07/24/87	0.2 U	NR	NR	0.2 U	NR	NR	112	NR	0.01 U
SW-063	07/06/88	0.033	0.500 U	0.003	0.104	0.002 U	0.004 U	93.0	NR	0.020 U
SW-063	03/28/89	DRY								
SW-063	05/12/89	DRY								
SW-063	06/21/89	DRY								
SW-063	07/19/89	DRY								
SW-063	08/11/89	DRY								
SW-063	09/15/89	DRY								
SW-063	10/04/89	DRY								
SW-063	11/03/89	DRY								
SW-063	12/01/89	DRY								
SW-063	01/05/90	DRY								
SW-063	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 63

Station Number	Date Sampled	Cobalt (Co), diss. mg/l	Copper (Cu), diss. mg/l	Iron (Fe), diss. mg/l	Lead (Pb), diss. mg/l	Lithium (Li), diss. mg/l	Magnesium (Mg), diss. mg/l	Manganese (Mn), diss. mg/l	Mercury (Hg), diss. mg/l	Molybdenum (Mo), diss. mg/l
SW-063	07/24/87	0.05 U	0.025 U	0.1 U	NR	NR	34.0	0.393	NR	0.04 U
SW-063	07/06/88	0.020 U	0.020 U	0.062	0.005	NR	32.2	0.412	0.0002 U	NR
SW-063	03/28/89	DRY								
SW-063	05/12/89	DRY								
SW-063	06/21/89	DRY								
SW-063	07/19/89	DRY								
SW-063	08/11/89	DRY								
SW-063	09/15/89	DRY								
SW-063	10/04/89	DRY								
SW-063	11/03/89	DRY								
SW-063	12/01/89	DRY								
SW-063	01/05/90	DRY								
SW-063	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 63

Station Number	Date Sampled	Nickel (Ni), diss. mg/l	Potassium (K), diss. mg/l	Selenium (Se), diss. mg/l	Silver (Ag), diss. mg/l	Sodium (Na), diss. mg/l	Strontium (Sr), diss. mg/l	Thallium (Tl), diss. mg/l	Tin (Sn), diss. mg/l	Vanadium (V), diss. mg/l
SW-063	07/24/87	0.04 U	NR	NR	0.01 U	110	1.07	NR	NR	0.05 U
SW-063	07/06/88	0.020 U	1.54	0.005 U	0.030 U	102	1.25	0.300 U	NR	0.010 U
SW-063	03/28/89	DRY								
SW-063	05/12/89	DRY								
SW-063	06/21/89	DRY								
SW-063	07/19/89	DRY								
SW-063	08/11/89	DRY								
SW-063	09/15/89	DRY								
SW-063	10/04/89	DRY								
SW-063	11/03/89	DRY								
SW-063	12/01/89	DRY								
SW-063	01/05/90	DRY								
SW-063	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 63

Station Number	Date Sampled	Zinc (Zn), diss. mg/l
SW-063	07/24/87	0.03
SW-063	07/06/88	0.028
SW-063	03/28/89	DRY
SW-063	05/12/89	DRY
SW-063	06/21/89	DRY
SW-063	07/19/89	DRY
SW-063	08/11/89	DRY
SW-063	09/15/89	DRY
SW-063	10/04/89	DRY
SW-063	11/03/89	DRY
SW-063	12/01/89	DRY
SW-063	01/05/90	DRY
SW-063	02/02/90	DRY

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water
Dissolved Metals Sampling Results

STATION 64

Station Number	Date Sampled	Aluminum (Al), diss. mg/l	Antimony (Sb), diss. mg/l	Arsenic (As), diss. mg/l	Barium (Ba), diss. mg/l	Beryllium (Be), diss. mg/l	Cadmium (Cd), diss. mg/l	Calcium (Ca), diss. mg/l	Cesium (Cs), diss. mg/l	Chromium (Cr), diss. mg/l
SW-064	07/22/87	0.2 U	NR	NR	0.2 U	NR	NR	45.8	NR	0.01 U
SW-064	07/07/88	0.049	0.500 U	0.002 U	0.105	0.002 U	0.004 U	57.5	NR	0.020 U
SW-064	03/30/89	DRY								
SW-064	05/22/89	.200 U V	.0600 U A	.0100 U R	.200 U V	.0050 U V	.0050 U R	63.10	1U A	.0100 U A
SW-064	06/27/89	.200 U A	.0600 U A	.0100 U R	.200 U V	.0050 U V	.0050 U V	71.60 V	.100 U V	.0100 U R
SW-064	07/19/89	DRY								
SW-064	08/11/89	DRY								
SW-064	09/20/89	DRY								
SW-064	10/04/89	DRY								
SW-064	11/09/89	DRY								
SW-064	12/01/89	DRY								
SW-064	01/05/90	DRY								
SW-064	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water
Dissolved Metals Sampling Results

STATION 64

Station Number	Date Sampled	Cobalt (Co), diss. mg/l	Copper (Cu), diss. mg/l	Iron (Fe), diss. mg/l	Lead (Pb), diss. mg/l	Lithium (Li), diss. mg/l	Magnesium (Mg), diss. mg/l	Manganese (Mn), diss. mg/l	Mercury (Hg), diss. mg/l	Molybdenum (Mo), diss. mg/l
SW-064	07/22/87	0.05 U	0.025 U	0.1 U	NR	NR	54.2	0.015 U	NR	0.04 U
SW-064	07/07/88	0.020 U	0.020 U	0.059	0.004 U	NR	48.8	0.074	0.0002 U	NR
SW-064	03/30/89	DRY								
SW-064	05/22/89	.0500 U V	.0250 U A	.100 U A	.0050 U A	.0946 A	45.30	.0364 A	.0002 U V	.0100 U A
SW-064	06/27/89	.0500 U V	.0250 U V	.100 U A	.0050 U A	.100 U V	51.80 V	.0290 V	.0002 U V	.100 U V
SW-064	07/19/89	DRY								
SW-064	08/11/89	DRY								
SW-064	09/20/89	DRY								
SW-064	10/04/89	DRY								
SW-064	11/09/89	DRY								
SW-064	12/01/89	DRY								
SW-064	01/05/90	DRY								
SW-064	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water
Dissolved Metals Sampling Results

STATION 64

Station Number	Date Sampled	Nickel (Ni), diss. mg/l	Potassium (K), diss. mg/l	Selenium (Se), diss. mg/l	Silver (Ag), diss. mg/l	Sodium (Na), diss. mg/l	Strontium (Sr), diss. mg/l	Thallium (Tl), diss. mg/l	Tin (Sn), diss. mg/l	Vanadium (V), diss. mg/l
SW-064	07/22/87	0.04 U	NR	NR	0.01 U	103	1.10	NR	NR	0.05 U
SW-064	07/07/88	0.020 U	1.38	0.005 U	0.030 U	106	1.02	0.300 U	NR	0.010 U
SW-064	03/30/89	DRY								
SW-064	05/22/89	.0400 U A	5U V	.0130 V	.0100 U V	110	1.14 V	.0400 U A	.100 U A	.0500 U V
SW-064	06/27/89	.0400 U V	5U R	.0050 U V	.0100 U A	106 V	1.17 A	.0100 U A	.100 U V	.0500 U V
SW-064	07/19/89	DRY								
SW-064	08/11/89	DRY								
SW-064	09/20/89	DRY								
SW-064	10/04/89	DRY								
SW-064	11/09/89	DRY								
SW-064	12/01/89	DRY								
SW-064	01/05/90	DRY								
SW-064	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 64

Station Number	Date Sampled	Zinc (Zn), diss. mg/l	
SW-064	07/22/87	0.02 U	
SW-064	07/07/88	0.021	
SW-064	03/30/89	DRY	
SW-064	05/22/89	.0200 U	R
SW-064	06/27/89	.0320	A
SW-064	07/19/89	DRY	
SW-064	08/11/89	DRY	
SW-064	09/20/89	DRY	
SW-064	10/04/89	DRY	
SW-064	11/09/89	DRY	
SW-064	12/01/89	DRY	
SW-064	01/05/90	DRY	
SW-064	02/02/90	DRY	

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 103

Station Number	Date Sampled	Aluminum (Al), diss. mg/l	Antimony (Sb), diss. mg/l	Arsenic (As), diss. mg/l	Barium (Ba), diss. mg/l	Beryllium (Be), diss. mg/l	Cadmium (Cd), diss. mg/l	Calcium (Ca), diss. mg/l	Cesium (Cs), diss. mg/l	Chromium (Cr), diss. mg/l
SW-103	07/11/88	0.035	0.500 U	0.002 U	0.168	0.002 U	0.004 U	99.6	NR	0.020 U
SW-103	03/23/89	.200 U V	.0600 U R	.0100 U R	.200 U V	.0050 U R	.0050 U V	115 E	1U V	.0100 U R
SW-103	05/25/89	Data not yet received								
SW-103	06/15/89	.200 U R	.0600 U A	.0100 U A	.200 V	.0050 U R	.0050 U A	121 V	1U V	.0100 U V
SW-103	07/13/89	.200 U V	.0600 U A	.0100 U A	.200 U V	.0050 U V	.0050 U V	115 V	1U V	.0100 U V
SW-103	08/02/89	.200 U A	.0600 U V	.0100 U V	.200 U V	.0050 U V	.0050 U V	112 V	1U V	.0100 U V
SW-103	09/07/89	Data not yet received								
SW-103	10/03/89	.0300 U R	.500 U V	.0020 U V	.151 V	.0020 U V	.0040 U V	101 V	.0010 U V	.0200 U V
SW-103	11/03/89	Data not yet received								
SW-103	12/06/89	Data not yet received								
SW-103	01/18/90	Data not yet received								
SW-103	02/12/90	Data not yet received								
SW-103	03/22/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value
J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 103

Station Number	Date Sampled	Cobalt (Co), diss. mg/l	Copper (Cu), diss. mg/l	Iron (Fe), diss. mg/l	Lead (Pb), diss. mg/l	Lithium (Li), diss. mg/l	Magnesium (Mg), diss. mg/l	Manganese (Mn), diss. mg/l	Mercury (Hg), diss. mg/l	Molybdenum (Mo), diss. mg/l
SW-103	07/11/88	0.020 U	0.020 U	0.061	0.004 U	NR	11.0	0.010 U	0.0002 U	NR
SW-103	03/23/89	.0500 U V	.0250 U R	.156 A	.0050 U R	.0100 U A	12.30 V	.0189 A	.0007 A	.0100 U A
SW-103	05/25/89	Data not yet received								
SW-103	06/15/89	.0500 U V	.0250 U V	.100 U V	.0050 U V	.100 U A	5U V	.0150 U R	.0005 A	.100 U A
SW-103	07/13/89	.0500 U V	.0250 U A	.100 U V	.0050 U A	.100 U A	12.60 V	.0462 V	.0002 U V	.100 U A
SW-103	08/02/89	.0500 U V	.0250 U R	.100 U R	.0050 U V	.100 U V	12.20 V	.0696 V	.0002 U R	.100 U V
SW-103	09/07/89	Data not yet received								
SW-103	10/03/89	.0200 U V	.0200 U V	.0853 A	.0020 U V	.0160 A	11.70 V	.0730 V	.0002 U A	.500 U V
SW-103	11/03/89	Data not yet received								
SW-103	12/06/89	Data not yet received								
SW-103	01/18/90	Data not yet received								
SW-103	02/12/90	Data not yet received								
SW-103	03/22/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 103

Station Number	Date Sampled	Nickel (Ni), diss. mg/l	Potassium (K), diss. mg/l	Selenium (Se), diss. mg/l	Silver (Ag), diss. mg/l	Sodium (Na), diss. mg/l	Strontium (Sr), diss. mg/l	Thallium (Tl), diss. mg/l	Tin (Sn), diss. mg/l	Vanadium (V), diss. mg/l
SW-103	07/11/88	0.020 U	0.853	0.005 U	0.030 U	11.3	0.395	0.300 U	NR	0.010 U
SW-103	03/23/89	.0400 U A	5U A	.0050 U A	.0100 U V	12.70 A	.420 A	.0100 U A	.100 U A	.0500 U R
SW-103	05/25/89	Data not yet received								
SW-103	06/15/89	.0400 U A	5U R	.0050 U V	.0100 U A	5U V	1U A	.0400 U A	.100 U A	.0500 U V
SW-103	07/13/89	.0400 U A	5U V	.0050 U A	.0100 U A	14.20 V	1U A	.0100 U A	.100 U A	.0500 U A
SW-103	08/02/89	.0400 U V	5U V	.0050 U A	.0100 U R	12.50 V	1U V	.0100 U A	.100 U V	.0500 U A
SW-103	09/07/89	Data not yet received								
SW-103	10/03/89	.0200 U V	.547 A	.0020 U V	.0300 U V	13.30 V	.421 V	.0030 U V	1U V	.0100 U V
SW-103	11/03/89	Data not yet received								
SW-103	12/06/89	Data not yet received								
SW-103	01/18/90	Data not yet received								
SW-103	02/12/90	Data not yet received								
SW-103	03/22/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Metals Sampling Results

STATION 103

Station Number	Date Sampled	Zinc (Zn), diss. mg/l
SW-103	07/11/88	0.024
SW-103	03/23/89	.0200 U A
SW-103	05/25/89	Data not yet received
SW-103	06/15/89	.0200 U V
SW-103	07/13/89	.0200 U V
SW-103	08/02/89	.0200 U V
SW-103	09/07/89	Data not yet received
SW-103	10/03/89	.0270 A
SW-103	11/03/89	Data not yet received
SW-103	12/06/89	Data not yet received
SW-103	01/18/90	Data not yet received
SW-103	02/12/90	Data not yet received
SW-103	03/22/90	Data not yet received

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

APPENDIX B-3

SURFACE WATER SAMPLING RESULTS

TOTAL METALS

Surface Water

Total Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Aluminum (Al), total mg/l	Antimony (Sb), total mg/l	Arsenic (As), total mg/l	Barium (Ba), total mg/l	Beryllium (Be), total mg/l	Cadmium (Cd), total mg/l	Calcium (Ca), total mg/l	Cesium (Cs), total mg/l	Chromium (Cr), total mg/l
SW-050	/ /	DRY								
SW-050	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-050	06/27/88	15.6	.040 U	.010 U	.459	.005 U	.005 U	118	NR	.0282
SW-050	06/27/88	Insufficient Sample or Total Metals Analysis not requested.								
SW-050	04/17/89	DRY								
SW-050	05/10/89	DRY								
SW-050	06/27/89	7.84 V	.0600 U A	.0100 U A	.317 V	.0050 U A	.0050 U A	122 A	1U V	.0148 A
SW-050	07/18/89	11.90 A	.0600 U V	.0100 U A	.350 V	.0050 U V	.0050 U V	123 V	1U V	.0169 A
SW-050	08/11/89	DRY								
SW-050	09/12/89	DRY								
SW-050	10/04/89	DRY								
SW-050	11/03/89	DRY								
SW-050	12/01/89	DRY								
SW-050	01/05/90	DRY								
SW-050	02/02/90	DRY								
SW-050	03/17/90	DRY								
SW-051	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-051	06/23/88	DRY								
SW-051	04/17/89	DRY								
SW-051	05/10/89	DRY								
SW-051	06/27/89	2.25 V	.0600 U A	.0100 U V	.209 V	.0050 U V	.0050 U A	104 A	1U V	.0100 U V
SW-051	07/18/89	DRY								
SW-051	08/11/89	DRY								
SW-051	09/12/89	DRY								
SW-051	10/04/89	DRY								
SW-051	11/03/89	DRY								
SW-051	12/01/89	DRY								
SW-051	01/05/90	DRY								
SW-051	02/02/90	DRY								
SW-052	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-052	06/23/88	4.29	.040 U	.010 U	.2 U	.005 U	.005 U	96.2	NR	.010 U
SW-052	04/17/89	DRY								
SW-052	05/10/89	DRY								
SW-052	06/09/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Cobalt (Co), total mg/l	Copper (Cu), total mg/l	Iron (Fe), total mg/l	Lead (Pb), total mg/l	Lithium (Li), total mg/l	Magnesium (Mg), total mg/l	Manganese (Mn), total mg/l	Mercury (Hg), total mg/l	Molybdenum (Mo), total mg/l
SW-050	/ /	DRY								
SW-050	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-050	06/27/88	.050 U	.0378	21.8	.0354	NR	13.9	.259	.0002 U	NR
SW-050	06/27/88	Insufficient Sample or Total Metals Analysis not requested.								
SW-050	04/17/89	DRY								
SW-050	05/10/89	DRY								
SW-050	06/27/89	.0500 U V	.0250 U A	14 A	.0179 V	.100 U A	11.70 V	.861 V	.0002 V	.100 U A
SW-050	07/18/89	.0500 U V	.0250 U V	16.70 A	.0177 A	.100 U V	12.30 V	.457 V	.0002 U V	.100 U V
SW-050	08/11/89	DRY								
SW-050	09/12/89	DRY								
SW-050	10/04/89	DRY								
SW-050	11/03/89	DRY								
SW-050	12/01/89	DRY								
SW-050	01/05/90	DRY								
SW-050	02/02/90	DRY								
SW-050	03/17/90	DRY								
SW-051	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-051	06/23/88	DRY								
SW-051	04/17/89	DRY								
SW-051	05/10/89	DRY								
SW-051	06/27/89	.0500 U V	.0250 U V	2 A	.0050 U A	.100 U A	8.19 V	.0284 V	.0002 U V	.100 U A
SW-051	07/18/89	DRY								
SW-051	08/11/89	DRY								
SW-051	09/12/89	DRY								
SW-051	10/04/89	DRY								
SW-051	11/03/89	DRY								
SW-051	12/01/89	DRY								
SW-051	01/05/90	DRY								
SW-051	02/02/90	DRY								
SW-052	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-052	06/23/88	.050 U	.025 U	3	.0389	NR	14.5	.0301	.0002 U	NR
SW-052	04/17/89	DRY								
SW-052	05/10/89	DRY								
SW-052	06/09/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Nickel (Ni), total mg/l	Potassium (K), total mg/l	Selenium (Se), total mg/l	Silver (Ag), total mg/l	Sodium (Na), total mg/l	Strontium (Sr), total mg/l	Thallium (Tl), total mg/l	Tin (Sn), Total mg/l	Vanadium (V), total mg/l
SW-050	/ /	DRY								
SW-050	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-050	06/27/88	.0654	5 U	.005 U	.010 U	13	.416	.010 U	NR	.0601
SW-050	06/27/88	Insufficient Sample or Total Metals Analysis not requested.								
SW-050	04/17/89	DRY								
SW-050	05/10/89	DRY								
SW-050	06/27/89	.0400 U R	5U A	.0050 U R	.0100 U A	8.64 V	1U V	.0100 U V	.108 A	.0500 U V
SW-050	07/18/89	.0400 U V	5U A	.0050 U R	.0100 U R	8.85 V	1U V	.0100 U R	.100 U V	.0500 U V
SW-050	08/11/89	DRY								
SW-050	09/12/89	DRY								
SW-050	10/04/89	DRY								
SW-050	11/03/89	DRY								
SW-050	12/01/89	DRY								
SW-050	01/05/90	DRY								
SW-050	02/02/90	DRY								
SW-050	03/17/90	DRY								
SW-051	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-051	06/23/88	DRY								
SW-051	04/17/89	DRY								
SW-051	05/10/89	DRY								
SW-051	06/27/89	.0400 U R	5U R	.0050 U A	.0100 U A	8.40 V	1U V	.0100 U A	.100 U A	.0500 U V
SW-051	07/18/89	DRY								
SW-051	08/11/89	DRY								
SW-051	09/12/89	DRY								
SW-051	10/04/89	DRY								
SW-051	11/03/89	DRY								
SW-051	12/01/89	DRY								
SW-051	01/05/90	DRY								
SW-051	02/02/90	DRY								
SW-052	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-052	06/23/88	.040 U	5 U	.005 U	.010 U	41.4	.440	.100 U	NR	.050 U
SW-052	04/17/89	DRY								
SW-052	05/10/89	DRY								
SW-052	06/09/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Zinc (Zn), total mg/l
SW-050	/ /	DRY
SW-050	07/21/87	Insufficient Sample or Total Metals Analysis not requested.
SW-050	06/27/88	.0902
SW-050	06/27/88	Insufficient Sample or Total Metals Analysis not requested.
SW-050	04/17/89	DRY
SW-050	05/10/89	DRY
SW-050	06/27/89	.0509 A
SW-050	07/18/89	.110 A
SW-050	08/11/89	DRY
SW-050	09/12/89	DRY
SW-050	10/04/89	DRY
SW-050	11/03/89	DRY
SW-050	12/01/89	DRY
SW-050	01/05/90	DRY
SW-050	02/02/90	DRY
SW-050	03/17/90	DRY
SW-051	07/21/87	Insufficient Sample or Total Metals Analysis not requested.
SW-051	06/23/88	DRY
SW-051	04/17/89	DRY
SW-051	05/10/89	DRY
SW-051	06/27/89	.0200 U A
SW-051	07/18/89	DRY
SW-051	08/11/89	DRY
SW-051	09/12/89	DRY
SW-051	10/04/89	DRY
SW-051	11/03/89	DRY
SW-051	12/01/89	DRY
SW-051	01/05/90	DRY
SW-051	02/02/90	DRY
SW-052	07/21/87	Insufficient Sample or Total Metals Analysis not requested.
SW-052	06/23/88	.0239
SW-052	04/17/89	DRY
SW-052	05/10/89	DRY
SW-052	06/09/89	DRY

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Aluminum (Al), total mg/l	Antimony (Sb), total mg/l	Arsenic (As), total mg/l	Barium (Ba), total mg/l	Beryllium (Be), total mg/l	Cadmium (Cd), total mg/l	Calcium (Ca), total mg/l	Cesium (Cs), total mg/l	Chromium (Cr), total mg/l
SW-052	07/07/89	DRY								
SW-052	08/11/89	DRY								
SW-052	09/28/89	DRY								
SW-052	10/04/89	DRY								
SW-052	11/03/89	DRY								
SW-052	12/01/89	DRY								
SW-052	01/05/90	DRY								
SW-052	02/02/90	DRY								
SW-052	03/17/90	DRY								
SW-055	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-055	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-055	06/22/88	.20 U	.040 U	.010 U	.310	.005 U	.005 U	127	NR	.010 U
SW-055	04/17/89	6.40 V	.0600 U A	.0100 U V	.307 V	.0069 A	.0050 U A	104 V	1U V	.0127 A
SW-055	05/25/89	Data not yet received								
SW-055	06/28/89	28.30 V	.0600 U A	.0100 U A	.573 V	.0050 U A	.0050 U A	107 A	1U V	.0288 A
SW-055	07/18/89	14.70 A	.0600 U V	.0100 U A	.492 V	.0050 U V	.0050 U V	156 V	1U V	.0113 A
SW-055	08/16/89	.267 A	.0600 U V	.0100 U R	.308 V	.0050 U V	.0050 U A	128 V	1U V	.0100 U V
SW-055	09/20/89	.200 U A	.0600 U A	.0100 U V	.346 V	.0050 U R	.0050 U V	142 A	1U R	.0100 U A
SW-055	10/19/89	.548 V	.500 U A	.0024 A	.269 V	.0020 U R	.0040 U A	118 V	.0010 U V	.0200 U A
SW-055	11/09/89	.222	.0600 U	.0100 U	.295	.0050 U	.0050 U	127	1U	.0100 U
SW-055	12/07/89	Data not yet received								
SW-055	01/16/90	Data not yet received								
SW-055	02/23/90	Data not yet received								
SW-055	03/15/90	Data not yet received								
SW-057	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-057	06/23/88	DRY								
SW-057	04/17/89	DRY								
SW-057	05/10/89	DRY								
SW-057	06/09/89	DRY								
SW-057	07/07/89	DRY								
SW-057	08/11/89	DRY								
SW-057	09/16/89	DRY								
SW-057	10/04/89	DRY								
SW-057	11/03/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Cobalt (Co), total mg/l	Copper (Cu), total mg/l	Iron (Fe), total mg/l	Lead (Pb), total mg/l	Lithium (Li), total mg/l	Magnesium (Mg), total mg/l	Manganese (Mn), total mg/l	Mercury (Hg), total mg/l	Molybdenum (Mo), total mg/l
SW-052	07/07/89	DRY								
SW-052	08/11/89	DRY								
SW-052	09/28/89	DRY								
SW-052	10/04/89	DRY								
SW-052	11/03/89	DRY								
SW-052	12/01/89	DRY								
SW-052	01/05/90	DRY								
SW-052	02/02/90	DRY								
SW-052	03/17/90	DRY								
SW-055	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-055	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-055	06/22/88	.05 U	.025 U	.102	.005 U	NR	26.6	.205	.0002 U	NR
SW-055	04/17/89	.0500 U V	.0295 A	6.20 V	.0155 V	.0831 A	21.10 V	.464 V	.0005 A	.0275 A
SW-055	05/25/89	Data not yet received								
SW-055	06/28/89	.0500 U V	.0570 V	26.70 A	.0576 V	.104 A	26.40 V	.771 V	.0002 U V	.100 U A
SW-055	07/18/89	.0500 U V	.0292 V	13.10 A	.0273 A	.172 V	31.10 V	.954 V	.0002 U V	.100 U V
SW-055	08/16/89	.0500 U V	.0250 U A	.186 A	.0030 U A	.180 A	26.10 V	.363 V	.0002 U V	.100 U V
SW-055	09/20/89	.0500 U V	.0250 U V	.187 A	.0050 U A	.132 A	27.90 V	.267 A	.0006 V	.100 U A
SW-055	10/19/89	.0200 U V	.0200 U A	.774 V	.0045 A	3.20 A	24.10 V	.280 V	.0002 U A	.500 U A
SW-055	11/09/89	.0500 U	.0250 U	.264	.0050 U	.165	27.50	.290	.0003	.100 U
SW-055	12/07/89	Data not yet received								
SW-055	01/16/90	Data not yet received								
SW-055	02/23/90	Data not yet received								
SW-055	03/15/90	Data not yet received								
SW-057	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-057	06/23/88	DRY								
SW-057	04/17/89	DRY								
SW-057	05/10/89	DRY								
SW-057	06/09/89	DRY								
SW-057	07/07/89	DRY								
SW-057	08/11/89	DRY								
SW-057	09/16/89	DRY								
SW-057	10/04/89	DRY								
SW-057	11/03/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Nickel (Ni), total mg/l	Potassium (K), total mg/l	Selenium (Se), total mg/l	Silver (Ag), total mg/l	Sodium (Na), total mg/l	Strontium (Sr), total mg/l	Thallium (Tl), total mg/l	Tin (Sn), Total mg/l	Vanadium (V), total mg/l
SW-052	07/07/89	DRY								
SW-052	08/11/89	DRY								
SW-052	09/28/89	DRY								
SW-052	10/04/89	DRY								
SW-052	11/03/89	DRY								
SW-052	12/01/89	DRY								
SW-052	01/05/90	DRY								
SW-052	02/02/90	DRY								
SW-052	03/17/90	DRY								
SW-055	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-055	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-055	06/22/88	.040 U	5 U	.0075	.010 U	73.8	.879	.100 U	NR	.050 U
SW-055	04/17/89	.0400 U R	5U A	.0050 U A	.0100 U V	42.30 V	1U A	.0100 U V	.100 U V	.0500 U V
SW-055	05/25/89	Data not yet received								
SW-055	06/28/89	.0400 U A	7.26 A	.0050 U R	.0100 U A	36.60 V	1U V	.0100 U A	.141 A	.0852 V
SW-055	07/18/89	.0400 U V	6.32 V	.0050 U R	.0100 U A	69.50 V	1U V	.0100 U R	.100 U V	.0500 U V
SW-055	08/16/89	.0400 U V	5U A	.0050 U A	.0100 U A	57.20 A	1U V	.100 U R	.100 U V	.0500 U R
SW-055	09/20/89	.0400 U R	5U A	.0050 U R	.0100 U A	86.90 A	1U R	.0400 U V	.100 U A	.0500 U A
SW-055	10/19/89	.0200 U R	2.31 A	.0020 U A	.0300 U R	67.40 V	.812 V	.0030 U A	1U A	.0100 U V
SW-055	11/09/89	.0400 U	5U	.0050 U	.0100 U	74.20	1U	.0200 U	.100 U	.0500 U
SW-055	12/07/89	Data not yet received								
SW-055	01/16/90	Data not yet received								
SW-055	02/23/90	Data not yet received								
SW-055	03/15/90	Data not yet received								
SW-057	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-057	06/23/88	DRY								
SW-057	04/17/89	DRY								
SW-057	05/10/89	DRY								
SW-057	06/09/89	DRY								
SW-057	07/07/89	DRY								
SW-057	08/11/89	DRY								
SW-057	09/16/89	DRY								
SW-057	10/04/89	DRY								
SW-057	11/03/89	DRY								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Zinc (Zn), total mg/l	
SW-052	07/07/89	DRY	
SW-052	08/11/89	DRY	
SW-052	09/28/89	DRY	
SW-052	10/04/89	DRY	
SW-052	11/03/89	DRY	
SW-052	12/01/89	DRY	
SW-052	01/05/90	DRY	
SW-052	02/02/90	DRY	
SW-052	03/17/90	DRY	
SW-055	07/21/87	Insufficient Sample or Total Metals Analysis not requested.	
SW-055	07/21/87	Insufficient Sample or Total Metals Analysis not requested.	
SW-055	06/22/88	.341	
SW-055	04/17/89	2.30	V
SW-055	05/25/89	Data not yet received	
SW-055	06/28/89	2.84	V
SW-055	07/18/89	1.93	A
SW-055	08/16/89	.944	V
SW-055	09/20/89	.976	A
SW-055	10/19/89	1.01	A
SW-055	11/09/89	1.32	
SW-055	12/07/89	Data not yet received	
SW-055	01/16/90	Data not yet received	
SW-055	02/23/90	Data not yet received	
SW-055	03/15/90	Data not yet received	
SW-057	07/21/87	Insufficient Sample or Total Metals Analysis not requested.	
SW-057	06/23/88	DRY	
SW-057	04/17/89	DRY	
SW-057	05/10/89	DRY	
SW-057	06/09/89	DRY	
SW-057	07/07/89	DRY	
SW-057	08/11/89	DRY	
SW-057	09/16/89	DRY	
SW-057	10/04/89	DRY	
SW-057	11/03/89	DRY	

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Aluminum (Al), total mg/l	Antimony (Sb), total mg/l	Arsenic (As), total mg/l	Barium (Ba), total mg/l	Beryllium (Be), total mg/l	Cadmium (Cd), total mg/l	Calcium (Ca), total mg/l	Cesium (Cs), total mg/l	Chromium (Cr), total mg/l
SW-057	12/01/89	DRY								
SW-057	01/05/90	DRY								
SW-057	02/02/90	DRY								
SW-057	03/17/90	DRY								
SW-058	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-058	06/23/88	.419	.040 U	.010 U	.214	.005 U	.005 U	111	NR	.010 U
SW-058	04/17/89	DRY								
SW-058	05/10/89	DRY								
SW-058	06/28/89	.550 V	.0600 U V	.0100 U A	.212 V	.0050 U A	.0050 U V	97.90 V	.100 U V	.0100 U V
SW-058	07/14/89	DRY								
SW-058	08/11/89	DRY								
SW-058	09/20/89	DRY								
SW-058	10/04/89	DRY								
SW-058	11/20/89	DRY								
SW-058	12/01/89	DRY								
SW-058	01/05/90	DRY								
SW-058	02/02/90	DRY								
SW-077	06/22/88	.0002 U	.00004 U	.00001 U	.0003	.005 U	.005 U	.109	NR	.00001 U
SW-077	03/30/89	DRY								
SW-077	05/11/89	DRY								
SW-077	06/27/89	1.17 V	.0600 U A	.0100 U A	.214 V	.0050 U A	.0050 U V	118U V	.100 U V	.0100 U R
SW-077	07/18/89	DRY								
SW-077	08/16/89	2.37 V	.0600 U V	.0100 U A	.200 U V	.0050 U V	.0050 U A	72.30 V	1U V	.0100 U V
SW-077	09/20/89	DRY								
SW-077	10/04/89	DRY								
SW-077	11/09/89	DRY								
SW-077	12/01/89	DRY								
SW-077	01/05/90	DRY								
SW-077	02/02/90	DRY								
SW-077	03/16/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water
Total Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Cobalt (Co), total mg/l	Copper (Cu), total mg/l	Iron (Fe), total mg/l	Lead (Pb), total mg/l	Lithium (Li), total mg/l	Magnesium (Mg), total mg/l	Manganese (Mn), total mg/l	Mercury (Hg), total mg/l	Molybdenum (Mo), total mg/l
SW-057	12/01/89	DRY								
SW-057	01/05/90	DRY								
SW-057	02/02/90	DRY								
SW-057	03/17/90	DRY								
SW-058	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-058	06/23/88	.050 U	.025 U	.489	.005 U	NR	20.1	.11	.0002 U	NR
SW-058	04/17/89	DRY								
SW-058	05/10/89	DRY								
SW-058	06/28/89	.0500 U V	.0321 A	.842 V	.0050 U V	.100 U V	11.30 V	.0457 V	.0002 U V	.100 U V
SW-058	07/14/89	DRY								
SW-058	08/11/89	DRY								
SW-058	09/20/89	DRY								
SW-058	10/04/89	DRY								
SW-058	11/20/89	DRY								
SW-058	12/01/89	DRY								
SW-058	01/05/90	DRY								
SW-058	02/02/90	DRY								
SW-077	06/22/88	.00005 U	.00003 U	.0001 U	.005 U	NR	.0229	.0016	.0002 U	NR
SW-077	03/30/89	DRY								
SW-077	05/11/89	DRY								
SW-077	06/27/89	.0500 U V	.0250 U V	2.54 A	.0136 A	.100 U V	24.50 V	.404 V	.0002 U V	.100 U V
SW-077	07/18/89	DRY								
SW-077	08/16/89	.0500 U V	.0250 U A	2.72 V	.0060 U A	.100 U V	14 V	.261 V	.0002 U V	.100 U V
SW-077	09/20/89	DRY								
SW-077	10/04/89	DRY								
SW-077	11/09/89	DRY								
SW-077	12/01/89	DRY								
SW-077	01/05/90	DRY								
SW-077	02/02/90	DRY								
SW-077	03/16/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Nickel (Ni), total mg/l	Potassium (K), total mg/l	Selenium (Se), total mg/l	Silver (Ag), total mg/l	Sodium (Na), total mg/l	Strontium (Sr), total mg/l	Thallium (Tl), total mg/l	Tin (Sn), Total mg/l	Vanadium (V), total mg/l
SW-057	12/01/89	DRY								
SW-057	01/05/90	DRY								
SW-057	02/02/90	DRY								
SW-057	03/17/90	DRY								
SW-058	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-058	06/23/88	.040 U	5 U	.005 U	.010 U	16.7	.765	.010 U	NR	.050 U
SW-058	04/17/89	DRY								
SW-058	05/10/89	DRY								
SW-058	06/28/89	.0400 U V	5U R	.0050 U A	.0100 U V	8.59 V	.468 V	.0100 U A	.100 U V	.0500 U V
SW-058	07/14/89	DRY								
SW-058	08/11/89	DRY								
SW-058	09/20/89	DRY								
SW-058	10/04/89	DRY								
SW-058	11/20/89	DRY								
SW-058	12/01/89	DRY								
SW-058	01/05/90	DRY								
SW-058	02/02/90	DRY								
SW-077	06/22/88	.00004 U	.0050 U	.005 U	.00001 U	.0592	.0006	.00001 U	NR	.00005 U
SW-077	03/30/89	DRY								
SW-077	05/11/89	DRY								
SW-077	06/27/89	.0400 U V	5U A	.0126 V	.0100 U A	44.10 V	.603 A	.0100 U A	.100 U V	.0500 U V
SW-077	07/18/89	DRY								
SW-077	08/16/89	.0400 U V	8.77 V	.0050 U V	.0100 U A	24.50 A	1U V	.0100 U R	.100 U V	.0500 U A
SW-077	09/20/89	DRY								
SW-077	10/04/89	DRY								
SW-077	11/09/89	DRY								
SW-077	12/01/89	DRY								
SW-077	01/05/90	DRY								
SW-077	02/02/90	DRY								
SW-077	03/16/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Zinc (Zn), total mg/l	
SW-057	12/01/89	DRY	
SW-057	01/05/90	DRY	
SW-057	02/02/90	DRY	
SW-057	03/17/90	DRY	
SW-058	07/21/87	Insufficient Sample or Total Metals Analysis not requested.	
SW-058	06/23/88	.020	U
SW-058	04/17/89	DRY	
SW-058	05/10/89	DRY	
SW-058	06/28/89	.0544	A
SW-058	07/14/89	DRY	
SW-058	08/11/89	DRY	
SW-058	09/20/89	DRY	
SW-058	10/04/89	DRY	
SW-058	11/20/89	DRY	
SW-058	12/01/89	DRY	
SW-058	01/05/90	DRY	
SW-058	02/02/90	DRY	
SW-077	06/22/88	.00003	
SW-077	03/30/89	DRY	
SW-077	05/11/89	DRY	
SW-077	06/27/89	.218	V
SW-077	07/18/89	DRY	
SW-077	08/16/89	.0521	A
SW-077	09/20/89	DRY	
SW-077	10/04/89	DRY	
SW-077	11/09/89	DRY	
SW-077	12/01/89	DRY	
SW-077	01/05/90	DRY	
SW-077	02/02/90	DRY	
SW-077	03/16/90	Date not yet received	

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 53

Station Number	Date Sampled	Aluminum (Al), total mg/l	Antimony (Sb), total mg/l	Arsenic (As), total mg/l	Barium (Ba), total mg/l	Beryllium (Be), total mg/l	Cadmium (Cd), total mg/l	Calcium (Ca), total mg/l	Cesium (Cs), total mg/l	Chromium (Cr), total mg/l
SW-053	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-053	06/23/88	2.35	.040 U	.010 U	.26	.005 U	.005 U	117	NR	.010 U
SW-053	06/23/88	Insufficient Sample or Total Metals Analysis not requested.								
SW-053	04/05/89	NR	NR	NR	NR	NR	NR	NR	NR	NR
SW-053	05/23/89	.666 V	.0600 U A	.0100 U A	.234 V	.0050 U V	.0050 U A	116 A	1U V	.0100 U A
SW-053	06/26/89	6.62 V	.0600 U V	.0200 U V	.448 V	.0055 V	.0050 U A	146 V	.100 U V	.0100 U V
SW-053	07/19/89	DRY								
SW-053	08/15/89	.200 U A	.0600 U V	.0100 U A	.232 V	.0050 U V	.0050 U A	140 V	1U V	.0100 U V
SW-053	09/20/89	.200 U R	.0600 U A	.0100 U V	.244 V	.0050 U R	.0050 U V	142 A	1U R	.0100 U A
SW-053	10/12/89	.400 A	.0600 U V	.0100 U A	.218 V	.0050 U V	.0050 U V	146 V	2.50 U V	.0100 U V
SW-053	11/07/89	Data not yet received								
SW-053	12/15/89	Data not yet received								
SW-053	01/17/90	Data not yet received								
SW-053	02/13/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 53

Station Number	Date Sampled	Cobalt (Co), total mg/l	Copper (Cu), total mg/l	Iron (Fe), total mg/l	Lead (Pb), total mg/l	Lithium (Li), total mg/l	Magnesium (Mg), total mg/l	Manganese (Mn), total mg/l	Mercury (Hg), total mg/l	Molybdenum (Mo), total mg/l
SW-053	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-053	06/23/88	.050 U	.025 U	5.95	.0623	NR	31	.712	.0002 U	NR
SW-053	06/23/88	Insufficient Sample or Total Metals Analysis not requested.								
SW-053	04/05/89	NR	NR	NR	.0050 U	NR	NR	NR	NR	NR
SW-053	05/23/89	.0500 U A	.0250 U A	8.62 A	.0050 U A	.0240 A	28.10 A	.651 A	.0002 U V	.0100 U A
SW-053	06/26/89	.0500 U V	.0299 A	22.30 V	.0200 U V	.100 U V	31.30 V	.719 V	.0002 U V	.100 U V
SW-053	07/19/89	DRY								
SW-053	08/15/89	.0500 U V	.0250 U A	5.64 V	.0030 U A	.100 U V	27.20 V	.501 V	.0002 U V	.100 U V
SW-053	09/20/89	.0500 U V	.0250 U V	5.06 V	.0050 U V	.100 U R	24.60 V	.474 A	.0007 V	.100 U A
SW-053	10/12/89	.0500 U V	.0250 U A	5.47 V	.0030 U R	.100 U V	26.20 V	.467 A	.0002 U V	.100 U V
SW-053	11/07/89	Data not yet received								
SW-053	12/15/89	Data not yet received								
SW-053	01/17/90	Data not yet received								
SW-053	02/13/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 53

Station Number	Date Sampled	Nickel (Ni), total mg/l	Potassium (K), total mg/l	Selenium (Se), total mg/l	Silver (Ag), total mg/l	Sodium (Na), total mg/l	Strontium (Sr), total mg/l	Thallium (Tl), total mg/l	Tin (Sn), Total mg/l	Vanadium (V), total mg/l
SW-053	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-053	06/23/88	.040 U	5 U	.005 U	.010 U	17.6	.802	.010 U	NR	.050 U
SW-053	06/23/88	Insufficient Sample or Total Metals Analysis not requested.								
SW-053	04/05/89	NR	NR	NR	NR	NR	NR	NR	NR	NR
SW-053	05/23/89	.0400 U R	5U A	.0250 U R	.0100 U A	20.90 V	1U V	.0100 U R	.100 U A	.0500 U A
SW-053	06/26/89	.0400 U V	5U A	.0050 U A	.0100 U V	17.10 V	.847 V	.0100 U R	.109 V	.0500 U V
SW-053	07/19/89	DRY								
SW-053	08/15/89	.0400 U V	5U V	.0050 U V	.0100 U A	14.70	1U V	.100 U R	.100 U V	.0500 U R
SW-053	09/20/89	.0400 U A	5U R	.0050 U R	.0100 U A	16.80 A	1U R	.0100 U A	.100 U A	.0500 U A
SW-053	10/12/89	.0400 U V	5U R	.0050 U A	.0100 U V	18.40 V	.796 A	.0100 U A	.100 U V	.0500 U V
SW-053	11/07/89	Data not yet received								
SW-053	12/15/89	Data not yet received								
SW-053	01/17/90	Data not yet received								
SW-053	02/13/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 53

Station Number	Date Sampled	Zinc (Zn), total mg/l	
SW-053	07/21/87	Insufficient Sample or Total Metals Analysis not requested.	
SW-053	06/23/88	.0252	
SW-053	06/23/88	Insufficient Sample or Total Metals Analysis not requested.	
SW-053	04/05/89	NR	
SW-053	05/23/89	.0200 U	R
SW-053	06/26/89	.121	V
SW-053	07/19/89	DRY	
SW-053	08/15/89	.0200 U	R
SW-053	09/20/89	.0269	A
SW-053	10/12/89	.0288	A
SW-053	11/07/89	Data not yet received	
SW-053	12/15/89	Data not yet received	
SW-053	01/17/90	Data not yet received	
SW-053	02/13/90	Data not yet received	

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Aluminum (Al), total mg/l	Antimony (Sb), total mg/l	Arsenic (As), total mg/l	Barium (Ba), total mg/l	Beryllium (Be), total mg/l	Cadmium (Cd), total mg/l	Calcium (Ca), total mg/l	Cesium (Cs), total mg/l	Chromium (Cr), total mg/l
SW-056	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-056	06/30/88	5.3	0.060 U	0.010 U	0.3	0.005 U	0.005 U	130	NR	0.010 U
SW-056	04/13/89	25.40 V	.0600 U A	.0100 U A	.244 V	.0121 A	.0050 U A	23 V	1U V	.0356 V
SW-056	05/11/89	11.50 V	.0600 U V	.0100 U A	.384 V	.0050 U A	.0050 U R	152 V	1U V	.0149 A
SW-056	06/07/89	.304 A	.0600 U A	.0100 U A	.293 A	.0050 U A	.0050 U V	135 A	.100 U V	.0100 U V
SW-056	07/12/89	1.19 V	.0600 U V	.0100 U V	.244 V	.0050 U V	.0050 U A	130 A	1U R	.0100 U V
SW-056	08/09/89	4.40 A	.0600 U A	.0100 U A	.286 V	.0050 U R	.0050 U V	126 V	1U V	.0100 U R
SW-056	09/14/89	.637 V	.0600 U A	.0100 U V	.209 V	.0050 U A	.0050 U R	106 A	1U A	.0100 U R
SW-056	10/18/89	Data not yet received								
SW-056	11/15/89	Data not yet received								
SW-056	12/19/89	Data not yet received								
SW-056	01/25/90	Data not yet received								
SW-056	02/22/90	Data not yet received								
SW-056	03/21/90	Data not yet received								
SW-060	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-060	11/11/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-060	07/01/88	0.200 U	0.060 U	0.010 U	0.200 U	0.005 U	0.005 U	106	NR	0.010 U
SW-060	03/16/89	.200 U A	.0600 U R	.0100 U A	.200 U A	.0050 U A	.0050 U R	90.80 V	1U V	.0100 U R
SW-060	03/16/89	.200 U R	.0600 U R	.0100 U A	.200 U A	.0050 U A	.0050 U V	92.20 V	1U V	.0100 U R
SW-060	05/15/89	.200 U R	.0600 U V	.0100 U V	.200 U V	.0050 U A	.0050 U R	71.20 V	1U V	.0100 U V
SW-060	05/15/89	.200 U R	.0600 U V	.0100 U V	.200 U V	.0050 U A	.0050 U R	70.20 V	1U V	.0100 U V
SW-060	06/09/89	.282 A	.0611 A	.0100 U V	.200 U A	.0050 U A	.0050 U R	94 A	1U V	.0100 U R
SW-060	07/06/89	1.89 V	.0600 U V	.0100 U A	.218 V	.0050 U V	.0050 U V	120 V	1U V	.0100 U V
SW-060	08/03/89	.296 V	.0600 U R	.0100 U V	.200 U V	.0050 U R	.0050 U V	101 V	1U V	.0100 U V
SW-060	09/11/89	Data not yet received								
SW-060	09/11/89	Data not yet received								
SW-060	10/03/89	.0300 U R	.500 U V	.0020 U V	.179 V	.0020 U V	.0040 U V	95 V	.0010 U V	.0200 U V
SW-060	11/06/89	Data not yet received								
SW-060	11/06/89	Data not yet received								
SW-060	12/06/89	Data not yet received								
SW-060	01/23/90	Data not yet received								
SW-060	02/09/90	Data not yet received								
SW-060	03/12/90	Data not yet received								
SW-061	07/22/87	Insufficient Sample or Total Metals Analysis not requested.								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Cobalt (Co), total mg/l	Copper (Cu), total mg/l	Iron (Fe), total mg/l	Lead (Pb), total mg/l	Lithium (Li), total mg/l	Magnesium (Mg), total mg/l	Manganese (Mn), total mg/l	Mercury (Hg), total mg/l	Molybdenum (Mo), total mg/l
SW-056	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-056	06/30/88	0.050 U	0.025 U	3.0	0.005 U	NR	24	.70	0.0002 U	NR
SW-056	04/13/89	.0500 U V	.0472 A	21.70 A	.0336 V	.0235 V	6.89 V	.260 A	.0003 V	.0465 A
SW-056	05/11/89	.0500 U A	.0250 U A	12.10 V	.0149 V	.0167 V	22.30 V	.879 V	.0002 U R	.0100 U V
SW-056	06/07/89	.0500 U V	.0326 A	8.88 A	.0124 V	.100 U R	20.70 A	.947 A	.0002 U V	.100 U V
SW-056	07/12/89	.0500 U R	.0250 U A	1.90 V	.0050 U A	.100 U R	22.30 A	.544 V	.0002 U V	.100 U V
SW-056	08/09/89	.0500 U V	.0250 U V	3.82 A	.0138 A	.100 U V	22.60 V	.645 V	.0004 V	.100 U V
SW-056	09/14/89	.0500 U V	.0250 U V	.486 V	.0050 U A	.100 U V	18.90 V	.475 V	.0002 U V	.100 U V
SW-056	10/18/89	Data not yet received								
SW-056	11/15/89	Data not yet received								
SW-056	12/19/89	Data not yet received								
SW-056	01/25/90	Data not yet received								
SW-056	02/22/90	Data not yet received								
SW-056	03/21/90	Data not yet received								
SW-060	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-060	11/11/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-060	07/01/88	0.050 U	0.025 U	0.100 U	0.005 U	NR	17	0.015 U	0.0002 U	NR
SW-060	03/16/89	.0500 U A	.0250 U V	.100 U A	.0050 U A	.100 U V	15.50 V	.0154 A	.0002 U V	.100 U V
SW-060	03/16/89	.0500 U A	.0250 U V	.100 U A	.0050 U A	.100 U V	15.90 V	.0150 U A	.0002 U V	.100 U V
SW-060	05/15/89	.0500 U A	.0250 U R	.100 U V	.0050 U R	.0100 U V	12.80 V	.0258 V	.0002 U R	.0100 U V
SW-060	05/15/89	.0500 U A	.0250 U R	.100 U V	.0050 U A	.0100 U V	12.80 V	.0222 V	.0002 U R	.0100 U V
SW-060	06/09/89	.0500 U A	.0250 U R	.564 V	.0050 U A	.152 V	13.80 A	.0373 V	.0002 U V	.100 U V
SW-060	07/06/89	.0500 U R	.0250 U A	1.52 V	.0050 U A	.100 U A	16.40 V	.0266 V	.0002 U A	.100 U A
SW-060	08/03/89	.0500 U V	.0250 U R	.187 V	.0050 U A	.100 U V	17.10 V	.0150 U A	.0002 U V	.100 U V
SW-060	09/11/89	.0500 U V	.0250 U R							
SW-060	09/11/89	Data not yet received								
SW-060	10/03/89	Data not yet received								
SW-060	11/06/89	.0200 U V	.0200 U V	.0855 A	.0020 U V	.0200 A	15.70 V	.0100 U A	.0002 U A	.500 U V
SW-060	11/06/89	Data not yet received								
SW-060	12/06/89	Data not yet received								
SW-060	01/23/90	Data not yet received								
SW-060	02/09/90	Data not yet received								
SW-060	03/12/90	Data not yet received								
SW-061	07/22/87	Insufficient Sample or Total Metals Analysis not requested.								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Nickel (Ni), total mg/l	Potassium (K), total mg/l	Selenium (Se), total mg/l	Silver (Ag), total mg/l	Sodium (Na), total mg/l	Strontium (Sr), total mg/l	Thallium (Tl), total mg/l	Tin (Sn), Total mg/l	Vanadium (V), total mg/l
SW-056	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-056	06/30/88	0.040 U	5.0 U	0.005 U	0.010 U	55	0.8	0.010 U	NR	0.050 U
SW-056	04/13/89	.0400 U A	6.05 A	.0250 U A	.0100 U V	7.48 V	1U V	.0100 U R	.100 U V	.0758 V
SW-056	05/11/89	.0400 U R	5U A	.0050 U A	.0100 U R	56.80 V	1U V	.0100 U A	.100 U V	.0500 U V
SW-056	06/07/89	.0400 U A	5U A	.0050 U A	.0100 U A	51.60 V	.641 A	.0100 U A	.100 U V	.0500 U V
SW-056	07/12/89	.0400 U V	5U R	.0050 U R	.0100 U A	55.10 A	1U R	.0400 U V	.100 U V	.0500 U A
SW-056	08/09/89	.0400 U V	5U V	.0050 U A	.0100 U A	58.20 V	1U V	.0400 U V	.100 U V	.0500 U A
SW-056	09/14/89	.0400 U R	5U R	.0050 U A	.0100 U A	48.10 V	1U V	.0100 U A	.100 U V	.0500 U V
SW-056	10/18/89	Data not yet received								
SW-056	11/15/89	Data not yet received								
SW-056	12/19/89	Data not yet received								
SW-056	01/25/90	Data not yet received								
SW-056	02/22/90	Data not yet received								
SW-056	03/21/90	Data not yet received								
SW-060	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-060	11/11/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-060	07/01/88	0.040 U	5.0 U	0.005 U	0.010 U	28	0.6	0.010 U	NR	0.050 U
SW-060	03/16/89	.0400 U A	5U A	.0050 U A	.0100 U A	30.70 V	.545 V	.0100 U A	.100 U V	.0500 U V
SW-060	03/16/89	.0400 U A	5U A	.0050 U A	.0100 U A	31.30 V	.564 V	.0100 U A	.100 U V	.0500 U V
SW-060	05/15/89	.0400 U R	5U R	.0050 U A	.0100 U A	30.60 V	1U V	.0100 U A	.100 U V	.0500 U V
SW-060	05/15/89	.0400 U R	5U R	.0050 U A	.0100 U A	30.30 V	1U V	.0100 U A	.100 U V	.0500 U V
SW-060	06/09/89	.0400 U A	5U A	.0050 U A	.0100 U A	28.30 V	1U V	.0100 U A	.100 U V	.0500 U R
SW-060	07/06/89	.0400 U A	5U V	.0050 U R	.0100 U R	27 V	1U A	.0100 U R	.100 U A	.0500 U V
SW-060	08/03/89	.0400 U V	5U V	.0050 U A	.0100 U V	32.20 V	1U V	.0100 U A	.100 U V	.0500 U V
SW-060	09/11/89	Data not yet received								
SW-060	09/11/89	Data not yet received								
SW-060	10/03/89	.0200 U V	.624 A	.0020 U V	.0300 U V	27.90 V	.520 V	.0030 U R	1U A	.0100 U V
SW-060	11/06/89	Data not yet received								
SW-060	11/06/89	Data not yet received								
SW-060	12/06/89	Data not yet received								
SW-060	01/23/90	Data not yet received								
SW-060	02/09/90	Data not yet received								
SW-060	03/12/90	Data not yet received								
SW-061	07/22/87	Insufficient Sample or Total Metals Analysis not requested.								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Zinc (Zn), total mg/l	
SW-056	07/21/87	Insufficient Sample or Total Metals Analysis not requested.	
SW-056	06/30/88	0.030	
SW-056	04/13/89	.201	V
SW-056	05/11/89	.0397	A
SW-056	06/07/89	.0818	A
SW-056	07/12/89	.0335	V
SW-056	08/09/89	.0952	A
SW-056	09/14/89	.108	V
SW-056	10/18/89	Data not yet received	
SW-056	11/15/89	Data not yet received	
SW-056	12/19/89	Data not yet received	
SW-056	01/25/90	Data not yet received	
SW-056	02/22/90	Data not yet received	
SW-056	03/21/90	Data not yet received	
SW-060	07/21/87	Insufficient Sample or Total Metals Analysis not requested.	
SW-060	11/11/87	Insufficient Sample or Total Metals Analysis not requested.	
SW-060	07/01/88	0.400	
SW-060	03/16/89	.396	V
SW-060	03/16/89	.479	V
SW-060	05/15/89	.318	A
SW-060	05/15/89	.300	A
SW-060	06/09/89	.556	V
SW-060	07/06/89	.550	A
SW-060	08/03/89	.275	V
SW-060	09/11/89	Data not yet received	
SW-060	09/11/89	Data not yet received	
SW-060	10/03/89	.411	V
SW-060	11/06/89	Data not yet received	
SW-060	11/06/89	Data not yet received	
SW-060	12/06/89	Data not yet received	
SW-060	01/23/90	Data not yet received	
SW-060	02/09/90	Data not yet received	
SW-060	03/12/90	Data not yet received	
SW-061	07/22/87	Insufficient Sample or Total Metals Analysis not requested.	

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value
J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Aluminum (Al), total mg/l	Antimony (Sb), total mg/l	Arsenic (As), total mg/l	Barium (Ba), total mg/l	Beryllium (Be), total mg/l	Cadmium (Cd), total mg/l	Calcium (Ca), total mg/l	Cesium (Cs), total mg/l	Chromium (Cr), total mg/l
SW-061	11/11/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-061	07/01/88	0.200 U	0.060 U	0.010 U	0.200 U	0.005 U	0.005 U	97	NR	0.010 U
SW-061	03/20/89	1.61 V	.0600 U A	.0100 U V	.200 U V	.0050 U R	.0050 U R	27.40 V	1U V	.0100 U V
SW-061	05/15/89	.200 U R	.0600 U V	.0100 U V	.200 U V	.0050 U A	.0050 U R	61.80 V	1U V	.0100 U A
SW-061	06/09/89	.200 U A	.0600 U V	.0100 U V	.200 U A	.0050 U A	.0050 U R	84.50 A	1U V	.0100 U R
SW-061	07/06/89	.281 A	.0600 U V	.0100 U V	.200 U V	.0050 U V	.0050 U V	90.50 V	1U V	.0100 U V
SW-061	08/03/89	.311 V	.0600 U V	.0100 U V	.200 U A	.0050 U R	.0050 U V	84.30 V	1U V	.0100 U R
SW-061	09/11/89	Data not yet received								
SW-061	10/03/89	.635 V	.500 U V	.0020 U V	.170 V	.0020 U V	.0040 U V	87.10 V	.0010 U V	.0200 U V
SW-061	10/20/89	DRY								
SW-061	11/06/89	Data not yet received								
SW-061	12/06/89	Data not yet received								
SW-061	01/23/90	Data not yet received								
SW-061	02/09/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-101	06/30/88	20.0	0.060 U	0.010 U	0.200 U	0.005 U	0.005 U	19	NR	0.010 U
SW-101	04/13/89	Data not yet received								
SW-101	05/11/89	24.10 V	.0600 U A	.0100 U V	2.02 V	.0572 A	.0142 A	152 V	1U V	.212 A
SW-101	06/07/89	1.77 A	.0600 U V	.0100 U A	.200 U A	.0050 U A	.0050 U V	19.90 A	.100 U V	.0100 U V
SW-101	07/12/89	.500 A	.0600 U V	.0100 U V	.200 U A	.0050 U V	.0050 U A	7.73 A	1U R	.0100 U V
SW-101	08/09/89	2.85 V	.0600 U V	.0100 U V	.200 U V	.0050 U A	.0050 U V	11.70 V	.100 U V	.0100 U V
SW-101	09/14/89	.200 U R	.0600 U A	.0100 U V	.200 U V	.0050 U A	.0050 U R	7.94 A	1U A	.0100 U R
SW-101	10/18/89	Data not yet received								
SW-101	11/15/89	Data not yet received								
SW-101	12/19/89	Data not yet received								
SW-101	01/25/90	Data not yet received								
SW-101	02/22/90	Data not yet received								
SW-101	03/21/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Cobalt (Co), total mg/l	Copper (Cu), total mg/l	Iron (Fe), total mg/l	Lead (Pb), total mg/l	Lithium (Li), total mg/l	Magnesium (Mg), total mg/l	Manganese (Mn), total mg/l	Mercury (Hg), total mg/l	Molybdenum (Mo), total mg/l
SW-061	11/11/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-061	07/01/88	0.050 U	0.025 U	0.30	0.005 U	NR	19	0.06 U	0.0002 U	NR
SW-061	03/20/89	.0500 U A	.0250 U V	1.73 V	.0250 U A	.100 U V	5.76 V	.0459 V	.0002 U V	.100 U V
SW-061	05/15/89	.0500 U A	.0250 U R	.165 V	.0250 U A	.0100 U V	11.80 V	.0406 V	.0002 U R	.0100 U V
SW-061	06/09/89	.0500 U A	.0250 U A	.411 V	.0050 U A	.100 U V	13.80 A	.0461 V	.0002 U V	.100 U V
SW-061	07/06/89	.0500 U V	.0250 U A	.362 V	.0050 U A	.100 U A	16.50 V	.0427 V	.0002 U A	.100 U A
SW-061	08/03/89	.0500 U V	.0250 U R	.320 V	.0050 U A	.100 U V	15.50	.0985 V	.0002 U V	.100 U V
SW-061	09/11/89	Data not yet received								
SW-061	10/03/89	.0200 U V	.0200 U V	.897 V	.0036 V	.0210 A	16.50 V	.0579 V	.0002 U A	.500 U V
SW-061	10/20/89	DRY								
SW-061	11/06/89	Data not yet received								
SW-061	12/06/89	Data not yet received								
SW-061	01/23/90	Data not yet received								
SW-061	02/09/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-101	06/30/88	0.050 U	0.025 U	15.0	0.010	NR	5.0 U	.13	0.0002 U	NR
SW-101	04/13/89	Data not yet received								
SW-101	05/11/89	.132 A	.293 A	204 V	.215 A	.145 V	36.70 V	3.68 V	.0024 A	.174 V
SW-101	06/07/89	.0500 U A	.0348 A	2.31 A	.0400 U V	.100 U R	5U A	.332 A	.0002 U V	.100 U V
SW-101	07/12/89	.0500 U V	.0250 U R	.854 V	.0050 U A	.100 U R	5U A	.0290 V	.0002 U V	.100 U V
SW-101	08/09/89	.0500 U V	.0250 U A	5.20 V	.0050 U A	.100 U A	5U V	.259 V	.0002 U V	.100 U V
SW-101	09/14/89	.0500 U V	.0250 U V	.357 V	.0050 U A	.100 U V	5U V	.0150 U V	.0002 U V	.100 U V
SW-101	10/18/89	Data not yet received								
SW-101	11/15/89	Data not yet received								
SW-101	12/19/89	Data not yet received								
SW-101	01/25/90	Data not yet received								
SW-101	02/22/90	Data not yet received								
SW-101	03/21/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Nickel (Ni), total mg/l	Potassium (K), total mg/l	Selenium (Se), total mg/l	Silver (Ag), total mg/l	Sodium (Na), total mg/l	Strontium (Sr), total mg/l	Thallium (Tl), total mg/l	Tin (Sn), Total mg/l	Vanadium (V), total mg/l
SW-061	11/11/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-061	07/01/88	0.040 U	5.0 U	0.005 U	0.010 U	32	0.60	0.010 U	NR	0.050 U
SW-061	03/20/89	.0400 U R	5U A	.0050 U A	.0100 U V	44.50 V	.205 V	.0100 U R	.100 U V	.0500 U V
SW-061	05/15/89	.0400 U R	5U A	.0059 A	.0100 U A	32.20 V	1U V	.0100 U A	.100 U V	.0500 U V
SW-061	06/09/89	.0400 U A	5U A	.0050 U A	.0100 U A	30.30 V	1U V	.0100 U A	.100 U V	.0500 U R
SW-061	07/06/89	.0400 U A	5U V	.0050 U R	.0100 U R	29 V	1U A	.0100 U R	.100 U A	.0500 U V
SW-061	08/03/89	.0400 U V	5U V	.0050 U A	.0100 U V	30.90 V	1U V	.0400 U V	.100 U V	.0500 U V
SW-061	09/11/89	Data not yet received								
SW-061	10/03/89	.0200 U V	1.27 A	.0020 U V	.0300 U V	30.60 V	.520 V	.0030 U R	1U V	.0100 U V
SW-061	10/20/89	DRY								
SW-061	11/06/89	Data not yet received								
SW-061	12/06/89	Data not yet received								
SW-061	01/23/90	Data not yet received								
SW-061	02/09/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-061	03/12/90	Data not yet received								
SW-101	06/30/88	0.040 U	5.0 U	0.005 U	0.010 U	6	0.200 U	0.010 U	NR	0.050
SW-101	04/13/89	Data not yet received								
SW-101	05/11/89	.246 A	21.50 V	.0050 U A	.0117 A	9.10 V	1U V	.0100 U A	.100 U V	.555 A
SW-101	06/07/89	.0400 U A	5U A	.0050 U V	.0100 U A	5.41 V	.100 U V	.0100 U V	.100 U V	.0500 U V
SW-101	07/12/89	.0400 U V	5U R	.0050 U R	.0100 U A	5.15 A	1U R	.0100 U V	.100 U V	.0500 U V
SW-101	08/09/89	.0400 U V	5U V	.0050 U V	.0100 U V	5U V	.100 U V	.0100 U V	.100 U V	.0500 U V
SW-101	09/14/89	.0400 U R	5U R	.0050 U A	.0100 U A	5U V	1U V	.0100 U V	.100 U V	.0500 U V
SW-101	10/18/89	Data not yet received								
SW-101	11/15/89	Data not yet received								
SW-101	12/19/89	Data not yet received								
SW-101	01/25/90	Data not yet received								
SW-101	02/22/90	Data not yet received								
SW-101	03/21/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Zinc (Zn), total mg/l		
SW-061	11/11/87	Insufficient Sample or Total Metals Analysis not requested.		
SW-061	07/01/88	0.140		
SW-061	03/20/89	.305		A
SW-061	05/15/89	.0917		A
SW-061	06/09/89	.267		V
SW-061	07/06/89	.207		A
SW-061	08/03/89	.195		V
SW-061	09/11/89	Data not yet received		
SW-061	10/03/89	.203		V
SW-061	10/20/89	DRY		
SW-061	11/06/89	Data not yet received		
SW-061	12/06/89	Data not yet received		
SW-061	01/23/90	Data not yet received		
SW-061	02/09/90	Data not yet received		
SW-061	03/12/90	Data not yet received		
SW-061	03/12/90	Data not yet received		
SW-101	06/30/88	0.100		
SW-101	04/13/89	Data not yet received		
SW-101	05/11/89	1.19		A
SW-101	06/07/89	.143		A
SW-101	07/12/89	.0200	U	A
SW-101	08/09/89	.0501		V
SW-101	09/14/89	.0200	U	A
SW-101	10/18/89	Data not yet received		
SW-101	11/15/89	Data not yet received		
SW-101	12/19/89	Data not yet received		
SW-101	01/25/90	Data not yet received		
SW-101	02/22/90	Data not yet received		
SW-101	03/21/90	Data not yet received		

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 59

Station Number	Date Sampled	Aluminum (Al), total mg/l	Antimony (Sb), total mg/l	Arsenic (As), total mg/l	Barium (Ba), total mg/l	Beryllium (Be), total mg/l	Cadmium (Cd), total mg/l	Calcium (Ca), total mg/l	Cesium (Cs), total mg/l	Chromium (Cr), total mg/l
SW-059	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-059	07/01/88	6.3	0.060 U	0.010 U	0.200 U	0.005 U	0.005 U	122	NR	0.010 U
SW-059	03/20/89	1.21 V	.0600 U R	.0100 U A	.208 V	.0050 U R	.0050 U R	119 A	1U V	.0100 U R
SW-059	05/11/89	22.80 V	.0600 U A	.0100 U A	.331 V	.0076 A	.0050 U R	466 V	1U V	.0232 A
SW-059	06/08/89	1.23 V	.0600 U V	.0100 U R	.200 U V	.0050 U A	.0050 U V	126 V	.100 U V	.0100 U V
SW-059	07/06/89	15 V	.102 A	.0100 U A	.461 V	.0057 A	.0050 U V	235 V	.100 U V	.0147 A
SW-059	08/10/89	Data not yet received								
SW-059	09/18/89	.200 U R	.0600 U V	.0100 U V	.200 U V	.0050 U A	.0050 U V	113 V	1U V	.0100 U V
SW-059	10/03/89	.190 V	.500 U V	.0020 U V	.166 V	.0020 U V	.0040 U V	102 V	.0010 U V	.0200 U V
SW-059	11/06/89	Data not yet received								
SW-059	12/06/89	Data not yet received								
SW-059	01/23/90	Data not yet received								
SW-059	02/09/90	Data not yet received								
SW-059	03/12/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 59

Station Number	Date Sampled	Cobalt (Co), total mg/l	Copper (Cu), total mg/l	Iron (Fe), total mg/l	Lead (Pb), total mg/l	Lithium (Li), total mg/l	Magnesium (Mg), total mg/l	Manganese (Mn), total mg/l	Mercury (Hg), total mg/l	Molybdenum (Mo), total mg/l
SW-059	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-059	07/01/88	0.050 U	0.025 U	5.0	0.005 U	NR	21	0.08	0.0002 U	NR
SW-059	03/20/89	.0500 U V	.0250 U V	1.18 V	.0317 A	.100 U V	28.70 V	.0331 V	.0006 A	.100 U V
SW-059	05/11/89	.0500 U A	.0250 U A	17 V	.0196 A	.0296 V	27.70 V	.135 A	.0002 U R	.0191 V
SW-059	06/08/89	.0500 U V	.0446 A	.845 V	.0050 U A	.100 U A	20.60 V	.0459 V	.0002 U V	.100 U V
SW-059	07/06/89	.0500 U V	.0437 V	16.10 A	.0258 A	2.56 V	28.40 V	.197 V	.0002 U V	.100 U V
SW-059	08/10/89	Data not yet received								
SW-059	09/18/89	.0500 U V	.0250 U V	.100 U V	.0050 U V	.100 U A	24.50 V	.0150 U A	.0002 U V	.100 U A
SW-059	10/03/89	.0200 U V	.0200 U V	.325 V	.0020 U A	.0250 A	21.90 V	.0100 U A	.0002 U A	.500 U V
SW-059	11/06/89	Data not yet received								
SW-059	12/06/89	Data not yet received								
SW-059	01/23/90	Data not yet received								
SW-059	02/09/90	Data not yet received								
SW-059	03/12/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 59

Station Number	Date Sampled	Nickel (Ni), total mg/l	Potassium (K), total mg/l	Selenium (Se), total mg/l	Silver (Ag), total mg/l	Sodium (Na), total mg/l	Strontium (Sr), total mg/l	Thallium (Tl), total mg/l	Tin (Sn), Total mg/l	Vanadium (V), total mg/l
SW-059	07/21/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-059	07/01/88	0.040 U	5.0 U	0.005 U	0.010 U	29	0.7	0.010 U	NR	0.050 U
SW-059	03/20/89	.0400 U V	5U A	.0050 U A	.0100 U V	36.80 V	.763 V	.0100 U R	.100 U V	.0500 U V
SW-059	05/11/89	.0400 U R	5U A	.0160 A	.0100 U A	37.60 V	1U V	.0100 U A	.100 U V	.0584 A
SW-059	06/08/89	.0400 U V	5U A	.0050 U A	.0100 U V	31.50 V	.601 A	.0100 U A	.100 U V	.0500 U V
SW-059	07/06/89	.0400 U V	5U A	.0500 U V	.0100 U A	30.50 V	1.36 A	.0100 U A	.100 U V	.0595 V
SW-059	08/10/89	Data not yet received								
SW-059	09/18/89	.0400 U R	5U R	.0050 U R	.0100 U V	34.80 V	1U A	.0100 U A	.100 U A	.0500 U V
SW-059	10/03/89	.0200 U V	.819 A	.0020 U V	.0300 U V	30.60 V	.643 V	.0030 U R	1U V	.0100 U V
SW-059	11/06/89	Data not yet received								
SW-059	12/06/89	Data not yet received								
SW-059	01/23/90	Data not yet received								
SW-059	02/09/90	Data not yet received								
SW-059	03/12/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 59

Station Number	Date Sampled	Zinc (Zn), total mg/l	
SW-059	07/21/87	Insufficient Sample or Total Metals Analysis not requested.	
SW-059	07/01/88	0.500	
SW-059	03/20/89	.573	A
SW-059	05/11/89	1.08	A
SW-059	06/08/89	.443	V
SW-059	07/06/89	2.66	V
SW-059	08/10/89	Data not yet received	
SW-059	09/18/89	.234	V
SW-059	10/03/89	.209	V
SW-059	11/06/89	Data not yet received	
SW-059	12/06/89	Data not yet received	
SW-059	01/23/90	Data not yet received	
SW-059	02/09/90	Data not yet received	
SW-059	03/12/90	Data not yet received	

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 63

Station Number	Date Sampled	Aluminum (Al), total mg/l	Antimony (Sb), total mg/l	Arsenic (As), total mg/l	Barium (Ba), total mg/l	Beryllium (Be), total mg/l	Cadmium (Cd), total mg/l	Calcium (Ca), total mg/l	Cesium (Cs), total mg/l	Chromium (Cr), total mg/l
SW-063	07/24/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-063	07/06/88	0.750	0.500 U	0.003	0.107	0.002 U	0.004 U	94.5	NR	0.020 U
SW-063	03/28/89	DRY								
SW-063	05/12/89	DRY								
SW-063	06/21/89	DRY								
SW-063	07/19/89	DRY								
SW-063	08/11/89	DRY								
SW-063	09/15/89	DRY								
SW-063	10/04/89	DRY								
SW-063	11/03/89	DRY								
SW-063	12/01/89	DRY								
SW-063	01/05/90	DRY								
SW-063	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 63

Station Number	Date Sampled	Cobalt (Co), total mg/l	Copper (Cu), total mg/l	Iron (Fe), total mg/l	Lead (Pb), total mg/l	Lithium (Li), total mg/l	Magnesium (Mg), total mg/l	Manganese (Mn), total mg/l	Mercury (Hg), total mg/l	Molybdenum (Mo), total mg/l
SW-063	07/24/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-063	07/06/88	0.020 U	0.020 U	1.32	0.006	NR	32.0	0.465	0.0002 U	NR
SW-063	03/28/89	DRY								
SW-063	05/12/89	DRY								
SW-063	06/21/89	DRY								
SW-063	07/19/89	DRY								
SW-063	08/11/89	DRY								
SW-063	09/15/89	DRY								
SW-063	10/04/89	DRY								
SW-063	11/03/89	DRY								
SW-063	12/01/89	DRY								
SW-063	01/05/90	DRY								
SW-063	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value
J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 63

Station Number	Date Sampled	Nickel (Ni), total mg/l	Potassium (K), total mg/l	Selenium (Se), total mg/l	Silver (Ag), total mg/l	Sodium (Na), total mg/l	Strontium (Sr), total mg/l	Thallium (Tl), total mg/l	Tin (Sn), Total mg/l	Vanadium (V), total mg/l
SW-063	07/24/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-063	07/06/88	0.020 U	1.61	0.011	0.030 U	98.4	1.25	0.300 U	NR	0.010 U
SW-063	03/28/89	DRY								
SW-063	05/12/89	DRY								
SW-063	06/21/89	DRY								
SW-063	07/19/89	DRY								
SW-063	08/11/89	DRY								
SW-063	09/15/89	DRY								
SW-063	10/04/89	DRY								
SW-063	11/03/89	DRY								
SW-063	12/01/89	DRY								
SW-063	01/05/90	DRY								
SW-063	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 63

Station Number	Date Sampled	Zinc (Zn), total mg/l
SW-063	07/24/87	Insufficient Sample or Total Metals Analysis not requested.
SW-063	07/06/88	0.020 U
SW-063	03/28/89	DRY
SW-063	05/12/89	DRY
SW-063	06/21/89	DRY
SW-063	07/19/89	DRY
SW-063	08/11/89	DRY
SW-063	09/15/89	DRY
SW-063	10/04/89	DRY
SW-063	11/03/89	DRY
SW-063	12/01/89	DRY
SW-063	01/05/90	DRY
SW-063	02/02/90	DRY

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 64

Station Number	Date Sampled	Aluminum (Al), total mg/l	Antimony (Sb), total mg/l	Arsenic (As), total mg/l	Barium (Ba), total mg/l	Beryllium (Be), total mg/l	Cadmium (Cd), total mg/l	Calcium (Ca), total mg/l	Cesium (Cs), total mg/l	Chromium (Cr), total mg/l
SW-064	07/22/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-064	07/07/88	15.4	0.500 U	0.006	0.268	0.002 U	0.007	136	NR	0.041
SW-064	03/30/89	DRY								
SW-064	05/22/89	.446 V	.0600 U A	.0100 U V	.200 U V	.0050 U V	.0050 U R	68.50	1U A	.0100 U A
SW-064	06/27/89	.998 V	.0600 U A	.0100 U R	.200 U V	.0050 U V	.0050 U V	72.60 V	.100 U V	.0100 U R
SW-064	07/19/89	DRY								
SW-064	08/11/89	DRY								
SW-064	09/20/89	DRY								
SW-064	10/04/89	DRY								
SW-064	11/09/89	DRY								
SW-064	12/01/89	DRY								
SW-064	01/05/90	DRY								
SW-064	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 64

Station Number	Date Sampled	Cobalt (Co), total mg/l	Copper (Cu), total mg/l	Iron (Fe), total mg/l	Lead (Pb), total mg/l	Lithium (Li), total mg/l	Magnesium (Mg), total mg/l	Manganese (Mn), total mg/l	Mercury (Hg), total mg/l	Molybdenum (Mo), total mg/l
SW-064	07/22/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-064	07/07/88	0.020 U	0.041	17.1	0.004 U	NR	56.7	0.368	0.0002 U	NR
SW-064	03/30/89	DRY								
SW-064	05/22/89	.0500 U V	.0250 U A	.920 V	.0050 U A	.0925 A	44.80	.0515 V	.0002 U V	.0100 U A
SW-064	06/27/89	.0500 U V	.0250 U V	1.07 A	.0050 U A	.100 U V	53.60 V	.0543 V	.0002 U V	.100 U V
SW-064	07/19/89	DRY								
SW-064	08/11/89	DRY								
SW-064	09/20/89	DRY								
SW-064	10/04/89	DRY								
SW-064	11/09/89	DRY								
SW-064	12/01/89	DRY								
SW-064	01/05/90	DRY								
SW-064	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 64

Station Number	Date Sampled	Nickel (Ni), total mg/l	Potassium (K), total mg/l	Selenium (Se), total mg/l	Silver (Ag), total mg/l	Sodium (Na), total mg/l	Strontium (Sr), total mg/l	Thallium (Tl), total mg/l	Tin (Sn), Total mg/l	Vanadium (V), total mg/l
SW-064	07/22/87	Insufficient Sample or Total Metals Analysis not requested.								
SW-064	07/07/88	0.023	3.42	0.010 U	0.030 U	110	1.36	0.300 U	NR	0.033
SW-064	03/30/89	DRY								
SW-064	05/22/89	.0400 U R	5U V	.0115 V	.0100 U V	107	1.14 V	.0400 U A	.100 U A	.0500 U A
SW-064	06/27/89	.0400 U V	5U R	.0050 U A	.0100 U A	99.30 V	1.20 A	.0100 U A	.100 U V	.0500 U V
SW-064	07/19/89	DRY								
SW-064	08/11/89	DRY								
SW-064	09/20/89	DRY								
SW-064	10/04/89	DRY								
SW-064	11/09/89	DRY								
SW-064	12/01/89	DRY								
SW-064	01/05/90	DRY								
SW-064	02/02/90	DRY								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 64

Station Number	Date Sampled	Zinc (Zn), total mg/l	
SW-064	07/22/87	Insufficient Sample or Total Metals Analysis not requested.	
SW-064	07/07/88	0.126	
SW-064	03/30/89	DRY	
SW-064	05/22/89	.0200 U	R
SW-064	06/27/89	.0779	V
SW-064	07/19/89	DRY	
SW-064	08/11/89	DRY	
SW-064	09/20/89	DRY	
SW-064	10/04/89	DRY	
SW-064	11/09/89	DRY	
SW-064	12/01/89	DRY	
SW-064	01/05/90	DRY	
SW-064	02/02/90	DRY	

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Metals Sampling Results

STATION 103

Station Number	Date Sampled	Aluminum (Al), total mg/l	Antimony (Sb), total mg/l	Arsenic (As), total mg/l	Barium (Ba), total mg/l	Beryllium (Be), total mg/l	Cadmium (Cd), total mg/l	Calcium (Ca), total mg/l	Cesium (Cs), total mg/l	Chromium (Cr), total mg/l
SW-103	07/11/88	0.766	0.500 U	0.002 U	0.174	0.002 U	0.004 U	99.0	NR	0.020 U
SW-103	03/23/89	169 V	.0600 U R	.0448 A	4.23 V	.0214 R	.0241 V	903 E	1.11 V	.172 R
SW-103	05/25/89	Data not yet received								
SW-103	06/15/89	2.11 V	.0600 U A	.0311 A	.831 V	.0050 U R	.0050 U A	279 V	1U V	.0370 A
SW-103	07/13/89	14.30 V	.0600 U A	.0103 A	.441 V	.0050 U V	.0050 U V	208 V	1U V	.0100 U A
SW-103	08/02/89	25.60 V	.0600 U V	.0149 V	.718 V	.0050 U V	.0050 U V	258 V	1U V	.0217 A
SW-103	09/07/89	Data not yet received								
SW-103	10/03/89	2.60 V	.500 U V	.0020 U V	.215 V	.0020 U V	.0040 U V	109 V	.0010 U V	.0200 U V
SW-103	11/03/89	Data not yet received								
SW-103	12/06/89	Data not yet received								
SW-103	01/18/90	Data not yet received								
SW-103	02/12/90	Data not yet received								
SW-103	03/22/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water
Total Metals Sampling Results

STATION 103

Station Number	Date Sampled	Cobalt (Co), total mg/l	Copper (Cu), total mg/l	Iron (Fe), total mg/l	Lead (Pb), total mg/l	Lithium (Li), total mg/l	Magnesium (Mg), total mg/l	Manganese (Mn), total mg/l	Mercury (Hg), total mg/l	Molybdenum (Mo), total mg/l
SW-103	07/11/88	0.020 U	0.020 U	0.691	0.005	NR	11.0	0.019	0.0002 U	NR
SW-103	03/23/89	.224 A	.213 R	142 R	.656 A	.116 A	56.80 V	10.70 A	NR	.114 A
SW-103	05/25/89	Data not yet received								
SW-103	06/15/89	.0500 U V	.0655 V	40.70 V	.116 A	.100 U A	5U V	3.18 A	.0009 A	.100 U A
SW-103	07/13/89	.0500 U V	.0386 V	19.70 V	.0249 A	.100 U A	15.70 V	.641 V	.0002 U R	.100 U A
SW-103	08/02/89	.0500 U V	.0476 A	32.10 R	.108 A	.100 U V	18.50 V	1.59 V	.0002 U V	.100 U V
SW-103	09/07/89	Data not yet received								
SW-103	10/03/89	.0200 U V	.0200 U V	2.88 V	.0071 V	.0180 A	11.90 V	.185 V	.0002 U A	.500 U V
SW-103	11/03/89	Data not yet received								
SW-103	12/06/89	Data not yet received								
SW-103	01/18/90	Data not yet received								
SW-103	02/12/90	Data not yet received								
SW-103	03/22/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water
Total Metals Sampling Results

STATION 103

Station Number	Date Sampled	Nickel (Ni), total mg/l	Potassium (K), total mg/l	Selenium (Se), total mg/l	Silver (Ag), total mg/l	Sodium (Na), total mg/l	Strontium (Sr), total mg/l	Thallium (Tl), total mg/l	Tin (Sn), Total mg/l	Vanadium (V), total mg/l
SW-103	07/11/88	0.020 U	0.928	0.005 U	0.030 U	11.3	0.389	0.300 U	NR	0.010 U
SW-103	03/23/89	.273 A	32.70 A	.0250 U A	.0100 U R	20.60 A	2.27 A	.0100 U A	.100 U R	.445 R
SW-103	05/25/89	Data not yet received								
SW-103	06/15/89	.0400 U A	5U A	.0050 U A	.0100 U R	5U A	1U A	.0400 U A	.100 U A	.113 A
SW-103	07/13/89	.0400 U A	5U A	.0050 U R	.0100 U A	16.30 V	1U A	.0100 U V	.100 U A	.0504 V
SW-103	08/02/89	.0400 U V	5.52 A	.0050 U A	.0100 U R	14.80 V	1U V	.0100 U A	.100 U V	.0906 A
SW-103	09/07/89	Data not yet received								
SW-103	10/03/89	.0200 U V	1.03 A	.0020 U V	.0300 U V	12.70 V	.431 V	.0030 U V	1U V	.0100 U V
SW-103	11/03/89	Data not yet received								
SW-103	12/06/89	Data not yet received								
SW-103	01/18/90	Data not yet received								
SW-103	02/12/90	Data not yet received								
SW-103	03/22/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water
Total Metals Sampling Results

STATION 103

Station Number	Date Sampled	Zinc (Zn), total mg/l	
SW-103	07/11/88	0.020	U
SW-103	03/23/89	.772	A
SW-103	05/25/89	Data not yet received	
SW-103	06/15/89	.324	A
SW-103	07/13/89	.161	V
SW-103	08/02/89	.251	A
SW-103	09/07/89	Data not yet received	
SW-103	10/03/89	.0200	A
SW-103	11/03/89	Data not yet received	
SW-103	12/06/89	Data not yet received	
SW-103	01/18/90	Data not yet received	
SW-103	02/12/90	Data not yet received	
SW-103	03/22/90	Data not yet received	

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

APPENDIX B-4

SURFACE WATER SAMPLING RESULTS

TOTAL INORGANIC COMPOUNDS

Surface Water
Total Inorganic Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Nitrate+ Nitrite-Nitrogen MG/L		Chloride MG/L		Sulfate MG/L		Total Dissolved Solids MG/L		HCO3- MG/L	
SW050	/ /		DRY								
SW050	07/21/87	4.15		59.0		21.1		510		261	
SW050	06/27/88	0.49		43.5		14.2		454		280	
SW050	06/27/88		INSUFFICIENT SAMPLE FOR INORGANIC ANALYSIS								
SW050	04/17/89		DRY								
SW050	05/10/89		DRY								
SW050	06/27/89	0.07	V	22	A	24	V	380	V	360	V
SW050	07/18/89	0.22		27		14		390		480	
SW050	08/11/89		DRY								
SW050	09/12/89		DRY								
SW050	10/04/89		DRY								
SW050	11/03/89		DRY								
SW050	12/01/89		DRY								
SW050	01/05/90		DRY								
SW050	02/02/90		DRY								
SW050	03/17/90		DRY								
SW051	07/21/87	4.90		16.9		61.0		332		436	
SW051	06/23/88		DRY								
SW051	04/17/89		DRY								
SW051	05/10/89		DRY								
SW051	06/27/89	1.8	V	32	A	24	V	360	V	290	V
SW051	07/18/89		DRY								
SW051	08/11/89		DRY								
SW051	09/12/89		DRY								
SW051	10/04/89		DRY								
SW051	11/03/89		DRY								
SW051	12/01/89		DRY								
SW051	01/05/90		DRY								
SW051	02/02/90		DRY								
SW052	07/21/87	0.20	U	25.5		73.3		461		297	
SW052	06/23/88	0.72		24.0		87.9		462		266	
SW052	04/17/89		DRY								
SW052	05/10/89		DRY								
SW052	06/09/89		DRY								
SW052	07/07/89		DRY								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value
J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Inorganic Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Nitrate+ Nitrite-Nitrogen MG/L		Chloride MG/L		Sulfate MG/L		Total Dissolved Solids MG/L		HCO3- MG/L	
SW052	08/11/89	DRY									
SW052	09/28/89	DRY									
SW052	10/04/89	DRY									
SW052	11/03/89	DRY									
SW052	12/01/89	DRY									
SW052	01/05/90	DRY									
SW052	02/02/90	DRY									
SW052	03/17/90	DRY									
SW055	07/21/87	0.24		34.0		37.2		452		326	
SW055	07/21/87	INSUFFICIENT SAMPLE FOR INORGANIC ANALYSIS									
SW055	06/22/88	0.18		50.5		89.4		700		454	
SW055	04/17/89	3.5	V	24	V	52	A	480	V	380	V
SW055	05/25/89	2.3	A	35	V	92	V	650	A	570	V
SW055	06/28/89	2.0	V	42	A	55	V	490	V	420	V
SW055	07/18/89	2.4		48		120		680		600	
SW055	08/16/89	5.6	V	56	V	81	V	690	A	520	V
SW055	09/20/89	5.2	A	120	V	81	V	790	A	510	V
SW055	10/19/89	5.6	V	55	V	79	V	680	A	500	A
SW055	11/09/89	5.7	V	63	V	88	A	650	A	530	A
SW055	12/07/89	4.5		63		100		710		564	
SW055	01/16/90	2.5	V	41	V	54	V	420	A	360	V
SW055	02/23/90	Data not yet received									
SW055	03/15/90	Data not yet received									
SW057	07/21/87	1.16		24.0		1.0 U		522		436	
SW057	06/23/88	DRY									
SW057	04/17/89	DRY									
SW057	05/10/89	DRY									
SW057	06/09/89	DRY									
SW057	07/07/89	DRY									
SW057	08/11/89	DRY									
SW057	09/16/89	DRY									
SW057	10/04/89	DRY									
SW057	11/03/89	DRY									
SW057	12/01/89	DRY									
SW057	01/05/90	DRY									

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Inorganic Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Nitrate+ Nitrite-Nitrogen MG/L		Chloride MG/L		Sulfate MG/L		Total Dissolved Solids MG/L		HCO3- MG/L	
SW057	02/02/90	DRY									
SW057	03/17/90	DRY									
SW058	07/21/87	1.42		32.0		22.0		375		270	
SW058	06/23/88	0.33		45.9		25.1		452		308	
SW058	04/17/89	DRY									
SW058	05/10/89	DRY									
SW058	06/28/89	0.60	A	30	V	30	A	440	A	310	V
SW058	07/14/89	DRY									
SW058	08/11/89	DRY									
SW058	09/20/89	DRY									
SW058	10/04/89	DRY									
SW058	11/20/89	DRY									
SW058	12/01/89	DRY									
SW058	01/05/90	DRY									
SW058	02/02/90	DRY									
SW077	06/22/88	0.10	U	55.7		64.7		574		338	
SW077	03/30/89	DRY									
SW077	05/11/89	DRY									
SW077	06/27/89	24	V	38	A	91	V	630	V	350	V
SW077	07/18/89	DRY									
SW077	08/16/89	0.06	V	33	V	100	V	450	A	220	V
SW077	09/20/89	DRY									
SW077	10/04/89	DRY									
SW077	11/09/89	DRY									
SW077	12/01/89	DRY									
SW077	01/05/90	DRY									
SW077	02/02/90	DRY									
SW077	03/16/90	Data not yet received									

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Inorganic Sampling Results

STATION 53

Station Number	Date Sampled	Nitrate+ Nitrite-Nitrogen MG/L			Chloride MG/L		Sulfate MG/L			Total Dissolved Solids MG/L		HCO3- MG/L	
SW053	07/21/87	0.20	U		71.5		20.3			666		483	
SW053	06/23/88	0.10	U		30.6		12.3			521		434	
SW053	06/23/88	INSUFFICIENT SAMPLE FOR INORGANIC ANALYSIS											
SW053	04/05/89	0.17		V	57	V	31		V	460	A	460	V
SW053	05/23/89	0.05	U	A	66	V	5	U	V	520	A	430	V
SW053	06/26/89	0.07		V	41	V	6		V	490	V	710	V
SW053	07/19/89	DRY											
SW053	08/15/89	0.05	U	V	57	V	33		A	570	A	470	V
SW053	09/20/89	0.05	U	A	170	V	49		V	580	A	440	V
SW053	10/12/89	0.05	U	V	61	V	27		A	510	A	480	A
SW053	11/07/89	0.05	U	V	68	V	49		A	520	A	370	V
SW053	12/15/89	0.05	U		61		43			500		456	
SW053	01/17/90	Data not yet received											
SW053	02/13/90	Data not yet received											

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Inorganic Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Nitrate+ Nitrite-Nitrogen MG/L		Chloride MG/L		Sulfate MG/L		Total Dissolved Solids MG/L		HCO3- MG/L	
SW056	07/21/87	4.10		54.0		71.8		577		346	
SW056	06/30/88	3.47		61.9		73.7		682		425	
SW056	04/13/89	3.2	A	59	V	54	V	590	A	440	V
SW056	05/11/89	2.9	A	45	V	74	V	670	A	440	V
SW056	06/07/89	3.8	V	48	V	60	A	510	V	440	V
SW056	07/12/89	3.2	V	48	V	70	V	610	V	520	V
SW056	08/09/89	2.9	V	58	V	73	V	640	A	460	V
SW056	09/14/89	4.4	V	48	A	46	V	580	A	450	V
SW056	10/18/89	3.5	V	57	V	70	V	78	A	500	A
SW056	11/15/89	2.6	V	61	V	72	V	640	A	520	A
SW056	12/19/89	3.1	V	58	V	68	V	620	A	540	A
SW056	01/25/90	Data not yet received									
SW056	02/22/90	Data not yet received									
SW056	03/21/90	Data not yet received									
SW060	07/21/87	4.5		44.0		45.0		482		290	
SW060	11/11/87	INSUFFICIENT SAMPLE FOR INORGANIC ANALYSIS									
SW060	07/01/88	4.77		54		52		459		300	
SW060	03/16/89	4.6	A	52	A	42	A	400	A	310	V
SW060	03/16/89	4.7	A	55	A	40	A	410	A	310	V
SW060	05/15/89	3.6	V	40	V	38	A	320	A	240	V
SW060	05/15/89	3.8	V	40	V	40	A	320	A	240	V
SW060	06/09/89	3.9	V	42	V	41	V	380	V	290	V
SW060	07/06/89	4.7	V	50	V	49	V	470	A	320	V
SW060	08/03/89	3.9	V	43	V	47	A	3300	A	300	V
SW060	09/11/89	2.4	A	13	V	31	V	120	A	130	V
SW060	09/11/89	2.3	A	12	V	16	V	150	A	130	V
SW060	10/03/89	4.3	V	52	V	43	V	420	A	330	V
SW060	11/06/89	4.5	V	44	V	47	V	440	A	330	A
SW060	11/06/89	4.2	V	45	V	43	V	440	A	340	A
SW060	12/06/89	4.9		50		47		420		312	
SW060	01/23/90	Data not yet received									
SW060	02/09/90	Data not yet received									
SW060	03/12/90	Data not yet received									
SW061	07/22/87	0.25		12.0		31.1		156		83.3	
SW061	11/11/87	INSUFFICIENT SAMPLE FOR INORGANIC ANALYSIS									

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value
J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Inorganic Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Nitrate+ Nitrite-Nitrogen MG/L		Chloride MG/L		Sulfate MG/L		Total Dissolved Solids MG/L		HCO3- MG/L	
SW061	07/01/88	4.6		50		51.4		441		235	
SW061	03/20/89	1.5	V	81	A	26	A	26	A	110	V
SW061	05/15/89	4.1	V	33	V	46	A	300	A	210	V
SW061	06/09/89	4.1	V	39	V	50	V	370	V	270	V
SW061	07/06/89	5.6	V	43	V	51	V	420	A	310	V
SW061	08/03/89	3.3	V	36	V	56	V	400	A	300	V
SW061	09/11/89	4.0	A	19	V	30	V	250	A	190	V
SW061	10/03/89	3.8	V	41	V	50	V	430	A	280	V
SW061	10/20/89			DRY							
SW061	11/06/89	3.8	V	40	V	47	V	400	A	320	A
SW061	12/06/89	3.6		36		50		380		300	
SW061	01/23/90	Data not yet received									
SW061	02/09/90	Data not yet received									
SW061	03/12/90	Data not yet received									
SW061	03/12/90	Data not yet received									
SW101	06/30/88	0.1 U		3.5		29		486		350	
SW101	04/13/89	0.05 U	A	3 U	V	16	V	180	A	47	V
SW101	05/11/89	0.11	A	3 U	V	24	V	170	A	72	V
SW101	06/07/89	0.07	V	4	V	19	A	72	V	33	V
SW101	07/12/89	0.05 U	V	4	V	22	V	82	V	18	V
SW101	08/09/89	0.05 U	V	3 U	V	18	V	74	A	25	V
SW101	09/14/89	0.05 U	V	20	A	16	V	90	A	22	V
SW101	10/18/89	0.05 U	V	3	V	20	V	620	A	31	A
SW101	11/15/89	0.05 U	V	3 U	V	29	V	58	A	6	A
SW101	12/19/89	0.05 U	A	3 U	V	17	V	54	A	32	A
SW101	01/25/90	Data not yet received									
SW101	02/22/90	Data not yet received									
SW101	03/21/90	Data not yet received									

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value
J = Present below detection limit; B = Present in laboratory blank; M = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Inorganic Sampling Results

STATION 59

Station Number	Date Sampled	Nitrate+ Nitrite-Nitrogen MG/L		Chloride MG/L		Sulfate MG/L		Total Dissolved Solids MG/L		HCO3- MG/L	
SW059	07/21/87	3.80		39.0		24.5		524		335	
SW059	07/01/88	5		51		53		499		324	
SW059	03/20/89	4.4	A	44	A	58	A	580	A	500	V
SW059	05/11/89	2.7	A	27	V	51	A	510	A	460	V
SW059	06/08/89	4.1	V	53	V	52	A	440	V	340	V
SW059	07/06/89	4.2	V	48	V	55	V	520	A	500	V
SW059	08/10/89	3.3		46		49		510		380	
SW059	09/18/89	4.3	V	39	V	60	A	510	A	410	V
SW059	10/03/89	3.9	V	51	V	45	V	210	A	400	V
SW059	11/06/89	4.2	V	44	V	46	V	460	A	370	A
SW059	12/06/89	4.2		50		46		480		384	
SW059	01/23/90		Data not yet received								
SW059	02/09/90		Data not yet received								
SW059	03/12/90		Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value; J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Inorganic Sampling Results

STATION 63

Station Number	Date Sampled	Nitrate+ Nitrite-Nitrogen MG/L	Chloride MG/L	Sulfate MG/L	Total Dissolved Solids MG/L	HCO3- MG/L
SW063	07/24/87	0.20 U	50.5	197	675	361
SW063	07/06/88	0.1 U	51	228	651	384
SW063	03/28/89	DRY				
SW063	05/12/89	DRY				
SW063	06/21/89	DRY				
SW063	07/19/89	DRY				
SW063	08/11/89	DRY				
SW063	09/15/89	DRY				
SW063	10/04/89	DRY				
SW063	11/03/89	DRY				
SW063	12/01/89	DRY				
SW063	01/05/90	DRY				
SW063	02/02/90	DRY				

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Inorganic Sampling Results

STATION 64

Station Number	Date Sampled	Nitrate+ Nitrite-Nitrogen MG/L			Chloride MG/L		Sulfate MG/L		Total Dissolved Solids MG/L		HCO3- MG/L	
SW064	07/22/87	0.20	U		46.5		83.0		716		404	
SW064	07/07/88	0.2			0.5	U	4.0	U	680		441	
SW064	03/30/89			DRY								
SW064	05/22/89	0.05	U	A	64	V	130	A	660	A	510	V
SW064	06/27/89	0.17		V	58	A	110	V	720	V	580	V
SW064	07/19/89			DRY								
SW064	08/11/89			DRY								
SW064	09/20/89			DRY								
SW064	10/04/89			DRY								
SW064	11/09/89			DRY								
SW064	12/01/89			DRY								
SW064	01/05/90			DRY								
SW064	02/02/90			DRY								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value
J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Inorganic Sampling Results

STATION 103

Station Number	Date Sampled	Nitrate+ Nitrite-Nitrogen MG/L		Chloride MG/L		Sulfate MG/L		Total Dissolved Solids MG/L		HCO3- MG/L	
SW103	07/11/88	5		40		59		247		251	
SW103	03/23/89	6.5	A	35	A	51	A	490	A	710	V
SW103	05/25/89	3.9	A	41	V	68	V	420	A	380	V
SW103	06/15/89	5.2	V	48	V	58	V	470	A	380	V
SW103	07/13/89	6.5	V	31	V	61	V	430	V	380	V
SW103	08/02/89	7.3	V	40	A	61	A	470	V	290	V
SW103	09/07/89	5.1	V	39	A	53	V	440	A	300	V
SW103	10/03/89	4.9	V	44	V	52	V	210	A	330	V
SW103	11/03/89	5.0	V	40	V	56	A	430	A	280	A
SW103	12/06/89	5.1		37		60		450		312	
SW103	01/18/90		Data not yet received								
SW103	02/12/90		Data not yet received								
SW103	03/22/90		Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported; U = Analyzed but not detected; * = Holding time not met; E = Estimated value
J = Present below detection limit; B = Present in laboratory blank; N = Batch spike not in 80-120% range

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

APPENDIX B-5

SURFACE WATER SAMPLING RESULTS

DISSOLVED RADIOCHEMISTRY

Surface Water

Dissolved Radiochemistry Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Gross Alpha pCi/l	mda	Gross Beta pCi/l	mda	Strontium 89, 90 pCi/l	mda	Plutonium 239, 240 pCi/l	mda	Americium 241 pCi/l	mda	Tritium pCi/l	mda
SW050	/ /		DRY										
SW050	07/21/87		***										
SW050	06/27/88	5.11 ± 3.88	5	3.28 ± 4.47	7	NR		0.575 ± 0.347	0.2	NR		NR	
SW050	06/27/88		***										
SW050	04/17/89		DRY										
SW050	05/10/89		DRY										
SW050	06/27/89		***										
SW050	07/18/89		***										
SW050	08/11/89		DRY										
SW050	09/12/89		DRY										
SW050	10/04/89		DRY										
SW050	11/03/89		DRY										
SW050	12/01/89		DRY										
SW050	01/05/90		DRY										
SW050	02/02/90		DRY										
SW050	03/17/90		DRY										
SW051	07/21/87		***										
SW051	06/23/88		DRY										
SW051	04/17/89		DRY										
SW051	05/10/89		DRY										
SW051	06/27/89		***										
SW051	07/18/89		DRY										
SW051	08/11/89		DRY										
SW051	09/12/89		DRY										
SW051	10/04/89		DRY										
SW051	11/03/89		DRY										
SW051	12/01/89		DRY										
SW051	01/05/90		DRY										
SW051	02/02/90		DRY										
SW052	07/21/87		***										
SW052	06/23/88	0.576 ± 3.77	6	0.00 ± 4.80	9	NR		0.369 ± 0.195	0.2	NR		NR	
SW052	04/17/89		DRY										
SW052	05/10/89		DRY										
SW052	06/09/89		DRY										
SW052	07/07/89		DRY										
SW052	08/11/89		DRY										

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW050	/ /		DRY
SW050	07/21/87		***
SW050	06/27/88	2.860	
SW050	06/27/88		***
SW050	04/17/89		DRY
SW050	05/10/89		DRY
SW050	06/27/89		***
SW050	07/18/89		***
SW050	08/11/89		DRY
SW050	09/12/89		DRY
SW050	10/04/89		DRY
SW050	11/03/89		DRY
SW050	12/01/89		DRY
SW050	01/05/90		DRY
SW050	02/02/90		DRY
SW050	03/17/90		DRY
SW051	07/21/87		***
SW051	06/23/88		DRY
SW051	04/17/89		DRY
SW051	05/10/89		DRY
SW051	06/27/89		***
SW051	07/18/89		DRY
SW051	08/11/89		DRY
SW051	09/12/89		DRY
SW051	10/04/89		DRY
SW051	11/03/89		DRY
SW051	12/01/89		DRY
SW051	01/05/90		DRY
SW051	02/02/90		DRY
SW052	07/21/87		***
SW052	06/23/88	3.720	
SW052	04/17/89		DRY
SW052	05/10/89		DRY
SW052	06/09/89		DRY
SW052	07/07/89		DRY
SW052	08/11/89		DRY

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*** = Insufficient Sample or Radiochemistry Analyses not requested.

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Gross Alpha pCi/l	mda	Gross Beta pCi/l	mda	Strontium 89, 90 pCi/l	mda	Plutonium 239, 240 pCi/l	mda	Americium 241 pCi/l	mda	Tritium pCi/l	mda
SW052	09/28/89		DRY										
SW052	10/04/89		DRY										
SW052	11/03/89		DRY										
SW052	12/01/89		DRY										
SW052	01/05/90		DRY										
SW052	02/02/90		DRY										
SW052	03/17/90		DRY										
SW055	07/21/87		***										
SW055	07/21/87		***										
SW055	06/22/88	2.30 ± 4.40	7	0.00 ± 5.07	9	NR		0.00 ± 0.846	1	NR		NR	
SW055	04/17/89		Data not yet received										
SW055	05/25/89		***										
SW055	06/28/89		***										
SW055	07/18/89		***										
SW055	08/16/89		***										
SW055	09/20/89		***										
SW055	10/19/89		***										
SW055	11/09/89		***										
SW055	12/07/89		***										
SW055	01/16/90		***										
SW055	02/23/90		***										
SW055	03/15/90		***										
SW057	07/21/87		***										
SW057	06/23/88		DRY										
SW057	04/17/89		DRY										
SW057	05/10/89		DRY										
SW057	06/09/89		DRY										
SW057	07/07/89		DRY										
SW057	08/11/89		DRY										
SW057	09/16/89		DRY										
SW057	10/04/89		DRY										
SW057	11/03/89		DRY										
SW057	12/01/89		DRY										
SW057	01/05/90		DRY										
SW057	02/02/90		DRY										
SW057	03/17/90		DRY										

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW052	09/28/89		DRY
SW052	10/04/89		DRY
SW052	11/03/89		DRY
SW052	12/01/89		DRY
SW052	01/05/90		DRY
SW052	02/02/90		DRY
SW052	03/17/90		DRY
SW055	07/21/87		***
SW055	07/21/87		***
SW055	06/22/88	5.020	
SW055	04/17/89		Data not yet received
SW055	05/25/89		***
SW055	06/28/89		***
SW055	07/18/89		***
SW055	08/16/89		***
SW055	09/20/89		***
SW055	10/19/89		***
SW055	11/09/89		***
SW055	12/07/89		***
SW055	01/16/90		***
SW055	02/23/90		***
SW055	03/15/90		***
SW057	07/21/87		DRY
SW057	06/23/88		DRY
SW057	04/17/89		DRY
SW057	05/10/89		DRY
SW057	06/09/89		DRY
SW057	07/07/89		DRY
SW057	08/11/89		DRY
SW057	09/16/89		DRY
SW057	10/04/89		DRY
SW057	11/03/89		DRY
SW057	12/01/89		DRY
SW057	01/05/90		DRY
SW057	02/02/90		DRY
SW057	03/17/90		DRY

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*** = Insufficient Sample or Radiochemistry Analyses not requested.

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Gross Alpha pCi/l	mda	Gross Beta pCi/l	mda	Strontium 89, 90 pCi/l	mda	Plutonium 239, 240 pCi/l	mda	Americium 241 pCi/l	mda	Tritium pCi/l	mda
SW058	07/21/87		***										
SW058	06/23/88	0.147 ± 3.73	6	0.00 ± 4.80	8	NR		1.06 ± 0.360	0.2	NR		NR	
SW058	04/17/89		DRY										
SW058	05/10/89		DRY										
SW058	06/28/89		***										
SW058	07/14/89		DRY										
SW058	08/11/89		DRY										
SW058	09/20/89		DRY										
SW058	10/04/89		DRY										
SW058	11/20/89		DRY										
SW058	12/01/89		DRY										
SW058	01/05/90		DRY										
SW058	02/02/90		DRY										
SW077	06/22/88	5.67 ± 4.81	7	0.00 ± 5.11	9	NR		0.0275 ± 0.735	1	NR		NR	
SW077	03/30/89		DRY										
SW077	05/11/89		DRY										
SW077	06/27/89		***										
SW077	07/18/89		DRY										
SW077	08/16/89		***										
SW077	09/20/89		DRY										
SW077	10/04/89		DRY										
SW077	11/09/89		DRY										
SW077	12/01/89		DRY										
SW077	01/05/90		DRY										
SW077	02/02/90		DRY										
SW077	03/16/90		***										

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*** = Insufficient Sample or Radiochemistry Analyses not requested.

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW058	07/21/87		***
SW058	06/23/88	4.100	
SW058	04/17/89		DRY
SW058	05/10/89		DRY
SW058	06/28/89		***
SW058	07/14/89		DRY
SW058	08/11/89		DRY
SW058	09/20/89		DRY
SW058	10/04/89		DRY
SW058	11/20/89		DRY
SW058	12/01/89		DRY
SW058	01/05/90		DRY
SW058	02/02/90		DRY
SW077	06/22/88	4.360	
SW077	03/30/89		DRY
SW077	05/11/89		DRY
SW077	06/27/89		***
SW077	07/18/89		DRY
SW077	08/16/89		***
SW077	09/20/89		DRY
SW077	10/04/89		DRY
SW077	11/09/89		DRY
SW077	12/01/89		DRY
SW077	01/05/90		DRY
SW077	02/02/90		DRY
SW077	03/16/90		***

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

STATION 53

Station Number	Date Sampled	Gross Alpha pCi/l	mda	Gross Beta pCi/l	mda	Strontium 89, 90 pCi/l	mda	Plutonium 239, 240 pCi/l	mda	Americium 241 pCi/l	mda	Tritium pCi/l	mda
SW053	07/21/87		***										
SW053	06/23/88	8.48 ± 4.74	6	0.353 ± 5.15	9	NR		1.89 ± 0.851	0.7	NR		NR	
SW053	06/23/88		***										
SW053	04/05/89	2 ± 6		7 ± 4		0.0 ± 0.4		0.20 ± 0.03		0.03 ± 0.03		NR	
SW053	05/23/89		***										
SW053	06/26/89		***										
SW053	07/19/89		DRY										
SW053	08/15/89		***										
SW053	09/20/89		***										
SW053	10/12/89		***										
SW053	11/07/89		***										
SW053	12/15/89		***										
SW053	01/17/90		***										
SW053	02/13/90		***										

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

STATION 53

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW053	07/21/87		***
SW053	06/23/88	7.260	
SW053	06/23/88		***
SW053	04/05/89	2.000	
SW053	05/23/89		***
SW053	06/26/89		***
SW053	07/19/89		DRY
SW053	08/15/89		***
SW053	09/20/89		***
SW053	10/12/89		***
SW053	11/07/89		***
SW053	12/15/89		***
SW053	01/17/90		***
SW053	02/13/90		***

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Gross Alpha pCi/l	mda	Gross Beta pCi/l	mda	Strontium 89, 90 pCi/l	mda	Plutonium 239, 240 pCi/l	mda	Americium 241 pCi/l	mda	Tritium pCi/l	mda
SW056	07/21/87		***										
SW056	06/30/88	3.21 ± 4.15	6	4.84 ± 4.66	7	NR		0.00 ± 0.126	0.3	NR		NR	
SW056	04/13/89	2 ± 9		6 ± 5		0.1 ± 0.3		0.00 ± 0.01		-0.02 ± 0.03		NR	
SW056	05/11/89		***										
SW056	06/07/89		***										
SW056	07/12/89		***										
SW056	08/09/89		***										
SW056	09/14/89		***										
SW056	10/18/89		***										
SW056	11/15/89		***										
SW056	12/19/89		***										
SW056	01/25/90		***										
SW056	02/22/90		***										
SW056	03/21/90		***										
SW060	07/21/87		***										
SW060	11/11/87		***										
SW060	07/01/88	3.64 ± 3.88	6	13.2 ± 4.98	7	NR		0.00 ± 0.0851	0.2	NR		NR	
SW060	03/16/89	7 ± 8		2 ± 4		0.3 ± 0.5		0.02 ± 0.01		0.00 ± 0.01		NR	
SW060	03/16/89	4 ± 7		6 ± 4		-0.1 ± 0.4		0.02 ± 0.01		-0.01 ± 0.01		NR	
SW060	05/15/89		***										
SW060	05/15/89		***										
SW060	06/09/89		***										
SW060	07/06/89		***										
SW060	08/03/89		***										
SW060	09/11/89		***										
SW060	09/11/89		***										
SW060	10/03/89		***										
SW060	11/06/89		***										
SW060	11/06/89		***										
SW060	12/06/89		***										
SW060	01/23/90		***										
SW060	02/09/90		***										
SW060	03/12/90		***										
SW061	07/22/87		***										
SW061	11/11/87		***										
SW061	07/01/88	20.6 ± 5.70	6	43.7 ± 6.44	7	NR		0.108 ± 0.133	0.1	NR		NR	

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW056	07/21/87		***
SW056	06/30/88	7.090	
SW056	04/13/89	6.800	
SW056	05/11/89		***
SW056	06/07/89		***
SW056	07/12/89		***
SW056	08/09/89		***
SW056	09/14/89		***
SW056	10/18/89		***
SW056	11/15/89		***
SW056	12/19/89		***
SW056	01/25/90		***
SW056	02/22/90		***
SW056	03/21/90		***
SW060	07/21/87		***
SW060	11/11/87		***
SW060	07/01/88	10.260	
SW060	03/16/89	4.600	
SW060	03/16/89	5.200	
SW060	05/15/89		***
SW060	05/15/89		***
SW060	06/09/89		***
SW060	07/06/89		***
SW060	08/03/89		***
SW060	09/11/89		***
SW060	09/11/89		***
SW060	10/03/89		***
SW060	11/06/89		***
SW060	11/06/89		***
SW060	12/06/89		***
SW060	01/23/90		***
SW060	02/09/90		***
SW060	03/12/90		***
SW061	07/22/87		***
SW061	11/11/87		***
SW061	07/01/88	8.790	

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Gross Alpha pCi/l	mda	Gross Beta pCi/l	mda	Strontium 89, 90 pCi/l	mda	Plutonium 239, 240 pCi/l	mda	Americium 241 pCi/l	mda	Tritium pCi/l	mda
SW061	03/20/89	4 ± 4		7 ± 3		-0.2 ± 0.4		0.01 ± 0.01		0.00 ± 0.02*		NR	
SW061	05/15/89		***										
SW061	06/09/89		***										
SW061	07/06/89		***										
SW061	08/03/89		***										
SW061	09/11/89		***										
SW061	10/03/89		***										
SW061	10/20/89		DRY										
SW061	11/06/89		***										
SW061	12/06/89		***										
SW061	01/23/90		***										
SW061	02/09/90		***										
SW061	03/12/90		***										
SW061	03/12/90		***										
SW101	06/30/88	0.00 ± 2.42	4	1.92 ± 4.07	7	NR		0.00 ± 0.0641	0.1	NR		NR	
SW101	04/13/89	0 ± 1		1 ± 2		0.2 ± 0.4		0.00 ± 0.01		-0.01 ± 0.03		NR	
SW101	05/11/89		***										
SW101	06/07/89		***										
SW101	07/12/89		***										
SW101	08/09/89		***										
SW101	09/14/89		***										
SW101	10/18/89		***										
SW101	11/15/89		***										
SW101	12/19/89		***										
SW101	01/25/90		***										
SW101	02/22/90		***										
SW101	03/21/90		***										

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW061	03/20/89	2.500	
SW061	05/15/89		***
SW061	06/09/89		***
SW061	07/06/89		***
SW061	08/03/89		***
SW061	09/11/89		***
SW061	10/03/89		***
SW061	10/20/89		DRY
SW061	11/06/89		***
SW061	12/06/89		***
SW061	01/23/90		***
SW061	02/09/90		***
SW061	03/12/90		***
SW061	03/12/90		***
SW101	06/30/88	0.617	
SW101	04/13/89	0.200	
SW101	05/11/89		***
SW101	06/07/89		***
SW101	07/12/89		***
SW101	08/09/89		***
SW101	09/14/89		***
SW101	10/18/89		***
SW101	11/15/89		***
SW101	12/19/89		***
SW101	01/25/90		***
SW101	02/22/90		***
SW101	03/21/90		***

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*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; @ = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

STATION 59

Station Number	Date Sampled	Gross Alpha pCi/l	mda	Gross Beta pCi/l	mda	Strontium 89, 90 pCi/l	mda	Plutonium 239, 240 pCi/l	mda	Americium 241 pCi/l	mda	Tritium pCi/l	mda
SW059	07/21/87		***										
SW059	07/01/88	5.03 ± 4.06	6	8.24 ± 4.87	7	NR		0.0117 ± 0.0629	0.07	NR		NR	
SW059	03/20/89	16 ± 12		-2 ± 5		-0.2 ± 0.4		0.01 ± 0.01		-0.01 ± 0.02		NR	
SW059	05/11/89		***										
SW059	06/08/89		***										
SW059	07/06/89		***										
SW059	08/10/89		***										
SW059	09/18/89		***										
SW059	10/03/89		***										
SW059	11/06/89		***										
SW059	12/06/89		***										
SW059	01/23/90		***										
SW059	02/09/90		***										
SW059	03/12/90		***										

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

STATION 59

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW059	07/21/87		***
SW059	07/01/88	5.660	
SW059	03/20/89	7.500	
SW059	05/11/89		***
SW059	06/08/89		***
SW059	07/06/89		***
SW059	08/10/89		***
SW059	09/18/89		***
SW059	10/03/89		***
SW059	11/06/89		***
SW059	12/06/89		***
SW059	01/23/90		***
SW059	02/09/90		***
SW059	03/12/90		***

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

STATION 63

Station Number	Date Sampled	Gross Alpha pCi/l	mda	Gross Beta pCi/l	mda	Strontium 89, 90 pCi/l	mda	Plutonium 239, 240 pCi/l	mda	Americium 241 pCi/l	mda	Tritium pCi/l	mda
SW063	07/24/87		***										
SW063	07/06/88	8.25 ± 4.72	6	18.9 ± 5.62	8	NR		0.0750 ± 0.0871	0.07	NR		NR	
SW063	03/28/89		DRY										
SW063	05/12/89		DRY										
SW063	06/21/89		DRY										
SW063	07/19/89		DRY										
SW063	08/11/89		DRY										
SW063	09/15/89		DRY										
SW063	10/04/89		DRY										
SW063	11/03/89		DRY										
SW063	12/01/89		DRY										
SW063	01/05/90		DRY										
SW063	02/02/90		DRY										

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

STATION 63

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW063	07/24/87		***
SW063	07/06/88	17.790	
SW063	03/28/89		DRY
SW063	05/12/89		DRY
SW063	06/21/89		DRY
SW063	07/19/89		DRY
SW063	08/11/89		DRY
SW063	09/15/89		DRY
SW063	10/04/89		DRY
SW063	11/03/89		DRY
SW063	12/01/89		DRY
SW063	01/05/90		DRY
SW063	02/02/90		DRY

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; Q = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

STATION 64

Station Number	Date Sampled	Gross Alpha pCi/l	mda	Gross Beta pCi/l	mda	Strontium 89, 90 pCi/l	mda	Plutonium 239, 240 pCi/l	mda	Americium 241 pCi/l	mda	Tritium pCi/l	mda
SW064	07/22/87		***										
SW064	07/07/88	6.34 ± 4.39	6	7.20 ± 5.33	8	NR		0.00 ± 0.201	0.3	NR		NR	
SW064	03/30/89		DRY										
SW064	05/22/89		***										
SW064	06/27/89		***										
SW064	07/19/89		DRY										
SW064	08/11/89		DRY										
SW064	09/20/89		DRY										
SW064	10/04/89		DRY										
SW064	11/09/89		DRY										
SW064	12/01/89		DRY										
SW064	01/05/90		DRY										
SW064	02/02/90		DRY										

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; Q = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

64

	Total Uranium pCi/l	mda
22/87		***
07/88	15.530	
30/89		DRY
22/89		***
27/89		***
19/89		DRY
11/89		DRY
20/89		DRY
04/89		DRY
09/89		DRY
01/89		DRY
05/90		DRY
02/90		DRY

IERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.

ION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

STATION 64

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW064	07/22/87		***
SW064	07/07/88	15.530	
SW064	03/30/89		DRY
SW064	05/22/89		***
SW064	06/27/89		***
SW064	07/19/89		DRY
SW064	08/11/89		DRY
SW064	09/20/89		DRY
SW064	10/04/89		DRY
SW064	11/09/89		DRY
SW064	12/01/89		DRY
SW064	01/05/90		DRY
SW064	02/02/90		DRY

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*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

STATION 103

Station Number	Date Sampled	Gross Alpha pCi/l	mda	Gross Beta pCi/l	mda	Strontium 89, 90 pCi/l	mda	Plutonium 239, 240 pCi/l	mda	Americium 241 pCi/l	mda	Tritium pCi/l	mda
SW103	07/11/88	8.03 ± 8.13	10	21.7 ± 10.2	20	NR		0.00 ± 0.0877	0.1	NR		NR	
SW103	03/23/89	5 ± 8		-4 ± 4		-0.2 ± 0.4		0.01 ± 0.02		0.00 ± 0.02		NR	
SW103	05/25/89		***										
SW103	06/15/89		***										
SW103	07/13/89		***										
SW103	08/02/89		***										
SW103	09/07/89		***										
SW103	10/03/89		***										
SW103	11/03/89		***										
SW103	12/06/89		***										
SW103	01/18/90		***										
SW103	02/12/90		***										
SW103	03/22/90		***										

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Dissolved Radiochemistry Sampling Results

STATION 103

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW103	07/11/88	4.440	
SW103	03/23/89	3.300	
SW103	05/25/89		***
SW103	06/15/89		***
SW103	07/13/89		***
SW103	08/02/89		***
SW103	09/07/89		***
SW103	10/03/89		***
SW103	11/03/89		***
SW103	12/06/89		***
SW103	01/18/90		***
SW103	02/12/90		***
SW103	03/22/90		***

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
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DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

APPENDIX B-6

SURFACE WATER SAMPLING RESULTS

TOTAL RADIOCHEMISTRY

Surface Water

Total Radiochemistry Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Gross Alpha pCi/l	mda	Gross Beta pCi/l	mda	Strontium 89,90 pCi/l	mda	Plutonium 239 pCi/l	mda	Americium 241 pCi/l	mda	Tritium pCi/l	mda
SW050	/ /		DRY										
SW050	07/21/87	26 ± 14		19 ± 49		<1.0		55 ± 7		0.0 ± 27		<110	
SW050	06/27/88	NR		NR		NR		0.928 ± 0.139	0.08	NR		829 ± 327	500
SW050	06/27/88		Data not yet received										
SW050	04/17/89		DRY										
SW050	05/10/89		DRY										
SW050	06/27/89	32 ± 8	7	24 ± 5	7	0.7 ± 0.5	0.	1.4 ± 0.1	0.	0.79 ± 0.05	0.	20 ± 220	31
SW050	07/18/89		Data not yet received										
SW050	08/11/89		DRY										
SW050	09/12/89		DRY										
SW050	10/04/89		DRY										
SW050	11/03/89		DRY										
SW050	12/01/89		DRY										
SW050	01/05/90		DRY										
SW050	02/02/90		DRY										
SW050	03/17/90		DRY										
SW051	07/21/87	58 ± 4		28 ± 8		<1		13 ± 3		0.0 ± 11		<110	
SW051	06/23/88		DRY										
SW051	04/17/89		DRY										
SW051	05/10/89		DRY										
SW051	06/27/89	11 ± 3	3	13 ± 2	3	0.0 ± 0.4	0.	0.69 ± 0.00	0.	1.0 ± 0.1	0.	-120 ± 220	31
SW051	07/18/89		DRY										
SW051	08/11/89		DRY										
SW051	09/12/89		DRY										
SW051	10/04/89		DRY										
SW051	11/03/89		DRY										
SW051	12/01/89		DRY										
SW051	01/05/90		DRY										
SW051	02/02/90		DRY										
SW052	07/21/87	114 ± 10		46 ± 15		<1		5.4 ± 1.5		0.2 ± 1.5		<110	
SW052	06/23/88	NR		NR		NR		0.595 ± 0.218	0.2	NR		0.00 ± 278	500
SW052	04/17/89		DRY										
SW052	05/10/89		DRY										
SW052	06/09/89		DRY										
SW052	07/07/89		DRY										
SW052	08/11/89		DRY										

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DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Radiochemistry Sampling Results

903-PAD AND LIP SITE

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW050	/ /		DRY
SW050	07/21/87	2.120	
SW050	06/27/88	2.640	
SW050	06/27/88		Data not yet received
SW050	04/17/89		DRY
SW050	05/10/89		DRY
SW050	06/27/89	4.500	
SW050	07/18/89		Data not yet received
SW050	08/11/89		DRY
SW050	09/12/89		DRY
SW050	10/04/89		DRY
SW050	11/03/89		DRY
SW050	12/01/89		DRY
SW050	01/05/90		DRY
SW050	02/02/90		DRY
SW050	03/17/90		DRY
SW051	07/21/87	3.200	
SW051	06/23/88		DRY
SW051	04/17/89		DRY
SW051	05/10/89		DRY
SW051	06/27/89	2.600	
SW051	07/18/89		DRY
SW051	08/11/89		DRY
SW051	09/12/89		DRY
SW051	10/04/89		DRY
SW051	11/03/89		DRY
SW051	12/01/89		DRY
SW051	01/05/90		DRY
SW051	02/02/90		DRY
SW052	07/21/87	1.770	
SW052	06/23/88	3.790	
SW052	04/17/89		DRY
SW052	05/10/89		DRY
SW052	06/09/89		DRY
SW052	07/07/89		DRY
SW052	08/11/89		DRY

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Surface Water

Total Radiochemistry Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Gross Alpha pCi/l	mda	Gross Beta pCi/l	mda	Strontium 89,90 pCi/l	mda	Plutonium 239 pCi/l	mda	Americium 241 pCi/l	mda	Tritium pCi/l	mda
SW056	07/21/87	8 ± 10		18 ± 16		3.6		0.0 ± .89		0.0 ± 2.0		<110	
SW056	06/30/88	NR		NR		NR		0.170 ± 0.190	0.1	NR		0.00 ± 312	500
SW056	04/13/89	41 ± 21		22 ± 8		0.3 ± 0.5		0.20 ± 0.03		0.10 ± 0.03		110 ± 150	
SW056	05/11/89	33 ± 17		36 ± 10		-0.1 ± 0.3		0.14 ± 0.02		0.06 ± 0.02		500 ± 150	
SW056	06/07/89	200 ± 50		79 ± 16		0.3 ± 0.3		2.5 ± 0.1		0.40 ± 0.05		310 ± 220	
SW056	07/12/89	19 ± 5	21	13 ± 6	10	0.2 ± 0.4	0.	0.05 ± 0.01	0.	0.05 ± 0.01	0.	170 ± 150	25
SW056	08/09/89		Data not yet received										
SW056	09/14/89	0.4 ± 2.0	R 5	10 ± 3	R 4	0.1 ± 0.1	0.5	0.009 ± 0.004	0.003	0.005 ± 0.006	0.003	-500 ± 300	400
SW056	10/18/89		Data not yet received										
SW056	11/15/89		Data not yet received										
SW056	12/19/89		Data not yet received										
SW056	01/25/90		Data not yet received										
SW056	02/22/90		Data not yet received										
SW056	03/21/90		Data not yet received										
SW060	07/21/87	8 ± 18		33 ± 24		<1.0		0.0 ± 1.1		0.0 ± 1.2		<110	
SW060	11/11/87		***										
SW060	07/01/88	NR		NR		NR		0.185 ± 0.141	0.09	NR		0.00 ± 315	500
SW060	03/16/89	7 ± 8		3 ± 4		-0.2 ± 0.5		0.02 ± 0.01		0.01 ± 0.02		30 ± 150	
SW060	03/16/89	7 ± 8		2 ± 4		-0.1 ± 0.5		0.03 ± 0.02		0.02 ± 0.02		170 ± 160	
SW060	05/15/89	2 ± 5		6 ± 3		-0.3 ± 0.5		0.04 ± 0.02		0.00 ± 0.01		300 ± 210	
SW060	05/15/89	4 ± 5		7 ± 3		-0.3 ± 0.5		0.00 ± 0.01		0.00 ± 0.01		350 ± 210	
SW060	06/09/89	14 ± 8		9 ± 3		0.0 ± 0.4		0.02 ± 0.01		0.02 ± 0.01		50 ± 150	
SW060	07/06/89	7 ± 3		6 ± 2		0.0 ± 0.4		0.03 ± 0.02		0.03 ± 0.02		-40 ± 140	
SW060	08/03/89		Data not yet received										
SW060	09/11/89	4.0 ± .9	.8	7.5 ± 2.1	2.8	-.08 ± .36	.61	.012 ± .012	.013	NR		100 ± 220	360
SW060	09/11/89	NR		NR		.24 ± .38	.59	.008 ± .007	.007	.019 ± .012	.010	140 ± 230	370
SW060	10/03/89		Data not yet received										
SW060	11/06/89		Data not yet received										
SW060	11/06/89		Data not yet received										
SW060	12/06/89		Data not yet received										
SW060	01/23/90		Data not yet received										
SW060	02/09/90		Data not yet received										
SW060	03/12/90		Data not yet received										
SW061	07/22/87	17 ± 12		41 ± 14		<1.0		0.0 ± .82		0.0 ± 1.2		<110	
SW061	11/11/87		***										
SW061	07/01/88	NR		NR		NR		0.0654 ± 0.0795	0.07	NR		0.00 ± 315	500

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Surface Water

Total Radiochemistry Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW056	07/21/87	3.390	
SW056	06/30/88	8.970	
SW056	04/13/89	5.000	
SW056	05/11/89	7.200	
SW056	06/07/89	10.500	
SW056	07/12/89	9.000	
SW056	08/09/89		Data not yet received
SW056	09/14/89	8.090	
SW056	10/18/89		Data not yet received
SW056	11/15/89		Data not yet received
SW056	12/19/89		Data not yet received
SW056	01/25/90		Data not yet received
SW056	02/22/90		Data not yet received
SW056	03/21/90		Data not yet received
SW060	07/21/87	4.270	
SW060	11/11/87		***
SW060	07/01/88	10.570	
SW060	03/16/89	4.400	
SW060	03/16/89	6.600	
SW060	05/15/89	3.200	
SW060	05/15/89	3.300	
SW060	06/09/89	5.000	
SW060	07/06/89	5.600	
SW060	08/03/89		Data not yet received
SW060	09/11/89	2.170	
SW060	09/11/89	3.370	
SW060	10/03/89		Data not yet received
SW060	11/06/89		Data not yet received
SW060	11/06/89		Data not yet received
SW060	12/06/89		Data not yet received
SW060	01/23/90		Data not yet received
SW060	02/09/90		Data not yet received
SW060	03/12/90		Data not yet received
SW061	07/22/87	1.990	
SW061	11/11/87		***
SW061	07/01/88	9.390	

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*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Radiochemistry Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Gross Alpha pCi/l	mda	Gross Beta pCi/l	mda	Strontium 89,90 pCi/l	mda	Plutonium 239 pCi/l	mda	Americium 241 pCi/l	mda	Tritium pCi/l	mda
SW061	03/20/89	8 ± 5		6 ± 3		-0.4 ± 0.4		0.04 ± 0.02		0.03 ± 0.02*		-60 ± 150	
SW061	05/15/89	4 ± 5		8 ± 3		-0.3 ± 0.4		0.01 ± 0.01		0.01 ± 0.01		300 ± 210	
SW061	06/09/89	11 ± 5		13 ± 3		0.1 ± 0.3		0.05 ± 0.01		0.05 ± 0.03		-30 ± 150	
SW061	07/06/89	4 ± 3		5 ± 2		-0.1 ± 0.4		0.02 ± 0.01		0.01 ± 0.01		-20 ± 140	
SW061	08/03/89	Data not yet received											
SW061	09/11/89	4.8 ± .9	.7	9.6 ± 2.1	2.5	.59 ± .44	.64	.009 ± .006	0	NR		280 ± 240	380
SW061	10/03/89	Data not yet received											
SW061	10/20/89	DRY											
SW061	11/06/89	Data not yet received											
SW061	12/06/89	Data not yet received											
SW061	01/23/90	Data not yet received											
SW061	02/09/90	Data not yet received											
SW061	03/12/90	Data not yet received											
SW061	03/12/90	Data not yet received											
SW101	06/30/88	NR		NR		NR		0.0463 ± 0.116	0.2	NR		0.00 ± 302	500
SW101	04/13/89	190 ± 70		140 ± 30		0.6 ± 0.8		0.57 ± 0.04		0.36 ± 0.10		30 ± 150	
SW101	05/11/89	780 ± 210		570 ± 100		2.2 ± 0.9		3.3 ± 0.1		0.44 ± 0.08		180 ± 150	
SW101	06/07/89	170 ± 50		110 ± 20		0.6 ± 0.6		0.71 ± 0.04		0.17 ± 0.04		60 ± 210	
SW101	07/12/89	26 ± 10	10	21 ± 5	7	0.9 ± 0.7	0.	0.37 ± 0.03	0.	0.00 ± 0.01	0.	-50 ± 150	25
SW101	08/09/89	Data not yet received											
SW101	09/14/89	-0.4 ± 0.8	R 0.8	14 ± 2	R 2	0.07 ± 0.13	0.5	0.002 ± 0.004	0.006	0.004 ± 0.008	0.01	-300 ± 300	400
SW101	10/18/89	Data not yet received											
SW101	11/15/89	Data not yet received											
SW101	12/19/89	Data not yet received											
SW101	01/25/90	Data not yet received											
SW101	02/22/90	Data not yet received											
SW101	03/21/90	Data not yet received											

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Radiochemistry Sampling Results

SOUTH WALNUT CREEK

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW061	03/20/89	2.500	
SW061	05/15/89	4.800	
SW061	06/09/89	5.800	
SW061	07/06/89	5.600	
SW061	08/03/89		Data not yet received
SW061	09/11/89	5.060	
SW061	10/03/89		Data not yet received
SW061	10/20/89		DRY
SW061	11/06/89		Data not yet received
SW061	12/06/89		Data not yet received
SW061	01/23/90		Data not yet received
SW061	02/09/90		Data not yet received
SW061	03/12/90		Data not yet received
SW061	03/12/90		Data not yet received
SW101	06/30/88	2.188	
SW101	04/13/89	4.100	
SW101	05/11/89	6.800	
SW101	06/07/89	2.000	
SW101	07/12/89	2.200	
SW101	08/09/89		Data not yet received
SW101	09/14/89	11.100	
SW101	10/18/89		Data not yet received
SW101	11/15/89		Data not yet received
SW101	12/19/89		Data not yet received
SW101	01/25/90		Data not yet received
SW101	02/22/90		Data not yet received
SW101	03/21/90		Data not yet received

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Radiochemistry Sampling Results

STATION 59

Station Number	Date Sampled	Gross Alpha pCi/l	mda	Gross Beta pCi/l	mda	Strontium 89,90 pCi/l	mda	Plutonium 239 pCi/l	mda	Americium 241 pCi/l	mda	Tritium pCi/l	mda
SW059	07/21/87	26 ± 6		28 ± 6		1.0		0.0 ± .93		0.03 ± 1.4		<110	
SW059	07/01/88	NR		NR		NR		0.00 ± 0.219	0.3	NR		0.00 ± 295	500
SW059	03/20/89	10 ± 14		9 ± 7		-0.1 ± 0.5		0.48 ± 0.04		0.20 ± 0.13		130 ± 150	
SW059	05/11/89	310 ± 140		340 ± 100		0.4 ± 0.7		0.9 ± 0.1		1.3 ± 0.1		70 ± 140	
SW059	06/08/89	Data not yet received											
SW059	07/06/89	140 ± 40		99 ± 20		-0.1 ± 0.4		3.1 ± 0.1		0.00 ± 0.01		80 ± 140	
SW059	08/10/89	Data not yet received											
SW059	09/18/89	0.7 ± 2.0	R 0.8	4 ± 3	R 4	0.1 ± 0.2	0.3	0.021 ± 0.007	0.006	-0.001 ± 0.004	0.007	-200 ± 300	400
SW059	10/03/89	Data not yet received											
SW059	11/06/89	Data not yet received											
SW059	12/06/89	Data not yet received											
SW059	01/23/90	Data not yet received											
SW059	02/09/90	Data not yet received											
SW059	03/12/90	Data not yet received											

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Radiochemistry Sampling Results

STATION 59

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW059	07/21/87	8.710	
SW059	07/01/88	9.460	
SW059	03/20/89	5.500	
SW059	05/11/89	16.600	
SW059	06/08/89		Data not yet received
SW059	07/06/89	0.200	
SW059	08/10/89		Data not yet received
SW059	09/18/89	6.800	
SW059	10/03/89		Data not yet received
SW059	11/06/89		Data not yet received
SW059	12/06/89		Data not yet received
SW059	01/23/90		Data not yet received
SW059	02/09/90		Data not yet received
SW059	03/12/90		Data not yet received

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Radiochemistry Sampling Results

STATION 63

Station Number	Date Sampled	Gross Alpha pCi/l	Gross Alpha mda	Gross Beta pCi/l	Gross Beta mda	Strontium 89,90 pCi/l	Strontium 89,90 mda	Plutonium 239 pCi/l	Plutonium 239 mda	Americium 241 pCi/l	Americium 241 mda	Tritium pCi/l	Tritium mda
SW063	07/24/87		***										
SW063	07/06/88	NR		NR		NR		0.242 ± 0.212	0.2	NR		1100 ± 306	500
SW063	03/28/89		DRY										
SW063	05/12/89		DRY										
SW063	06/21/89		DRY										
SW063	07/19/89		DRY										
SW063	08/11/89		DRY										
SW063	09/15/89		DRY										
SW063	10/04/89		DRY										
SW063	11/03/89		DRY										
SW063	12/01/89		DRY										
SW063	01/05/90		DRY										
SW063	02/02/90		DRY										

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Radiochemistry Sampling Results

STATION 63

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW063	07/24/87		***
SW063	07/06/88	20.500	
SW063	03/28/89		DRY
SW063	05/12/89		DRY
SW063	06/21/89		DRY
SW063	07/19/89		DRY
SW063	08/11/89		DRY
SW063	09/15/89		DRY
SW063	10/04/89		DRY
SW063	11/03/89		DRY
SW063	12/01/89		DRY
SW063	01/05/90		DRY
SW063	02/02/90		DRY

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Radiochemistry Sampling Results

STATION 64

Station Number	Date Sampled	Gross Alpha pCi/l	mda	Gross Beta pCi/l	mda	Strontium 89,90 pCi/l	mda	Plutonium 239 pCi/l	mda	Americium 241 pCi/l	mda	Tritium pCi/l	mda
SW064	07/22/87	34 ± 7		93 ± 16		1.5		0.1 ± 1.2		0.01 ± 1.3		<110	
SW064	07/07/88	NR		NR		NR		0.123 ± 0.229	0.2	NR		282 ± 303	500
SW064	03/30/89		DRY										
SW064	05/22/89		Data not yet received										
SW064	06/27/89	17 ± 7	7	17 ± 3	4	0.1 ± 0.4	0.	0.00 ± 0.01	0.	0.00 ± 0.01	0.	60 ± 230	31
SW064	07/19/89		DRY										
SW064	08/11/89		DRY										
SW064	09/20/89		DRY										
SW064	10/04/89		DRY										
SW064	11/09/89		DRY										
SW064	12/01/89		DRY										
SW064	01/05/90		DRY										
SW064	02/02/90		DRY										

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Radiochemistry Sampling Results

STATION 64

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW064	07/22/87	11.200	
SW064	07/07/88	23.590	
SW064	03/30/89		DRY
SW064	05/22/89		Data not yet received
SW064	06/27/89	3.600	
SW064	07/19/89		DRY
SW064	08/11/89		DRY
SW064	09/20/89		DRY
SW064	10/04/89		DRY
SW064	11/09/89		DRY
SW064	12/01/89		DRY
SW064	01/05/90		DRY
SW064	02/02/90		DRY

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Radiochemistry Sampling Results

STATION 103

Station Number	Date Sampled	Gross Alpha pCi/l	mda	Gross Beta pCi/l	mda	Strontium 89,90 pCi/l	mda	Plutonium 239 pCi/l	mda	Americium 241 pCi/l	mda	Tritium pCi/l	mda
SW103	07/11/88	NR		NR		NR		0.0928 ± 0.0920	0.1	NR		458 ± 290	500
SW103	03/23/89	53 ± 39		55 ± 18		-0.5 ± 0.6		0.74 ± 0.05		0.10 ± 0.04		160 ± 160	
SW103	05/25/89	36 ± 18		38 ± 10		-0.1 ± 0.4		1.4 ± 0.1		0.12 ± 0.02		200 ± 210	
SW103	06/15/89	0 ± 1		1 ± 2		-0.1 ± 0.5		0.01 ± 0.01		0.00 ± 0.02		100 ± 230	
SW103	07/13/89	Data not yet received											
SW103	08/02/89	Data not yet received											
SW103	09/07/89	14.0 ± 3.3	2.9	18.8 ± 3.0	3.4	.37 ± .38	.60	.152 ± .035	0	.330 ± .090	0	240 ± 390	390
SW103	10/03/89	Data not yet received											
SW103	11/03/89	Data not yet received											
SW103	12/06/89	Data not yet received											
SW103	01/18/90	Data not yet received											
SW103	02/12/90	Data not yet received											
SW103	03/22/90	Data not yet received											

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.

DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

Surface Water

Total Radiochemistry Sampling Results

STATION 103

Station Number	Date Sampled	Total Uranium pCi/l	mda
SW103	07/11/88	7.330	
SW103	03/23/89	7.000	
SW103	05/25/89	2.400	
SW103	06/15/89	0.100	
SW103	07/13/89	Data not yet received	
SW103	08/02/89	Data not yet received	
SW103	09/07/89	2.690	
SW103	10/03/89	Data not yet received	
SW103	11/03/89	Data not yet received	
SW103	12/06/89	Data not yet received	
SW103	01/18/90	Data not yet received	
SW103	02/12/90	Data not yet received	
SW103	03/22/90	Data not yet received	

VALUE QUALIFIERS: NR = Analyte not requested or analyte data not yet received
*** = Insufficient Sample or Radiochemistry Analyses not requested.
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

APPENDIX C

SURFACE WATER SAMPLING RESULTS

SUMMARY TABLES

OPERABLE UNIT NO. 2

903-PAD AND LIP SITE
VOLATILE ORGANIC COMPOUND CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN ug/l

Analyte	Background Value***	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of All Values**
Chloromethane	10 U		18	0	10.000 U	10 U	5
Bromomethane	10 U		18	0	10.000 U	10 U	5
Vinyl Chloride	10 U	2	18	0	2 J	2 J	5 +
Chloroethane	10 U		18	0	10.000 U	10 U	5
Methylene Chloride	5 U	5U#	18	3	6 B +	1 JB	4
Acetone	10 U	10U#	18	2	12 +	1 JB	6
Carbon Disulfide	5 U	5U#	18	0	3 J	2 J	2
1,1-Dichloroethene	5 U	7	24	5	140 +	5 U	27 +
1,1-Dichloroethane	5 U	5U#	18	0	1 J	1 J	2
1,2-Dichloroethene (total)	5 U	5U#	19	2	11 +	5 U	3
Chloroform	5 U	1U	24	10	84 +	2 J +	9 +
1,2-Dichloroethane	5 U	5	24	0	5.0000 U	5 U	3
2-Butanone	10 U		18	0	10.000 U	10 U	5
1,1,1-Trichloroethane	5 U	200	24	0	9	1 J	3
Carbon Tetrachloride	5 U	5	24	6	1005 +	1 J	62 +
Vinyl Acetate	10 U		18	0	10.000 U	10 U	5
Bromodichloromethane	5 U		18	0	5.0000 U	5 U	3
1,2-Dichloropropane	5 U		18	0	5.0000 U	5 U	3
cis-1,3-Dichloropropene	5 U		18	0	5.0000 U	5 U	3
Trichloroethene	5 U	5	24	16	2500 +	5	132 +
Dibromochloromethane	5 U		18	0	5.0000 U	5 U	3
1,1,2-Trichloroethane	5 U	5U	24	0	5.0000 U	5 U	3
Benzene	5 U	5U	18	0	5.0000 U	5 U	3
Trans-1,3-Dichloropropene	5 U		18	0	5.0000 U	5 U	3
Bromoform	5 U		18	0	5.0000 U	5 U	3
4-Methyl-2-pentanone	10 U		18	0	10.000 U	10 U	5
2-Hexanone	10 U		18	0	10.000 U	10 U	5
Tetrachloroethene	5 U	1U	24	10	65 +	2 J +	15 +
1,1,2,2-Tetrachloroethane	5 U	1U	18	0	5.0000 U	5 U +	3 +
Toluene	5 U	2000	18	0	1 J	1 J	2
Chlorobenzene	5 U		18	0	5.0000 U	5 U	3
Ethylbenzene	5 U		18	0	5.0000 U	5 U	3
Styrene	5 U		18	0	5.0000 U	5 U	3
Total Xylenes	5 U		18	0	5.0000 U	5 U	3

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW050, SW051, SW052, SW055, SW057, SW058, SW077

STATION 53
VOLATILE ORGANIC COMPOUND CONCENTRATIONS IN SURFACE WATER
ALL CONCENTRATIONS IN ug/l

Analyte	Background Value***	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of All Values**
Chloromethane	10 U		7	0	10.000 U	10 U	5
Bromomethane	10 U		7	0	10.000 U	10 U	5
Vinyl Chloride	10 U	2	7	0	10.000 U	10 U +	5 +
Chloroethane	10 U		7	0	10.000 U	10 U	5
Methylene Chloride	5 U	5U#	7	2	9 B +	5 B	4
Acetone	10 U	10U#	7	1	11 +	3 J	6
Carbon Disulfide	5 U	5U#	7	0	2 J	2 J	2
1,1-Dichloroethene	5 U	7	8	0	5.0000 U	5 U	3
1,1-Dichloroethane	5 U	5U#	7	0	5.0000 U	5 U	3
1,2-Dichloroethene (total)	5 U	5U#	7	3	42 +	5 U	15 +
Chloroform	5 U	1U	8	0	5.0000 U	5 U +	3 +
1,2-Dichloroethane	5 U	5	8	0	5.0000 U	5 U	3
2-Butanone	10 U		7	0	10.000 U	10 U	5
1,1,1-Trichloroethane	5 U	200	8	0	5.0000 U	5 U	3
Carbon Tetrachloride	5 U	5	8	0	5.0000 U	5 U	3
Vinyl Acetate	10 U		7	0	10.000 U	10 U	5
Bromodichloromethane	5 U		7	0	5.0000 U	5 U	3
1,2-Dichloropropane	5 U		7	0	5.0000 U	5 U	3
cis-1,3-Dichloropropene	5 U		7	0	5.0000 U	5 U	3
Trichloroethene	5 U	5	8	1	13 +	1 J	4
Dibromochloromethane	5 U		7	0	5.0000 U	5 U	3
1,1,2-Trichloroethane	5 U	5U	8	0	5.0000 U	5 U	3
Benzene	5 U	5U	7	0	5.0000 U	5 U	3
Trans-1,3-Dichloropropene	5 U		7	0	5.0000 U	5 U	3
Bromoform	5 U		7	0	5.0000 U	5 U	3
4-Methyl-2-pentanone	10 U		7	0	10.000 U	10 U	5
2-Hexanone	10 U		7	0	10.000 U	10 U	5
Tetrachloroethene	5 U	1U	8	0	5.0000 U	5 U +	3 +
1,1,2,2-Tetrachloroethane	5 U	1U	7	0	5.0000 U	5 U +	3 +
Toluene	5 U	2000	7	0	2 J	2 J	2
Chlorobenzene	5 U		7	0	5.0000 U	5 U	3
Ethylbenzene	5 U		7	0	5.0000 U	5 U	3
Styrene	5 U		7	0	5.0000 U	5 U	3
Total Xylenes	5 U		7	0	5.0000 U	5 U	3

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW053

SOUTH WALNUT CREEK
VOLATILE ORGANIC COMPOUND CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN ug/l

Analyte	Background Value***	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of All Values**
Chloromethane	10 U		25	0	10.000 U	10 U	5
Bromomethane	10 U		25	0	10.000 U	10 U	5
Vinyl Chloride	10 U	2	25	5	15 +	2 J	6 +
Chloroethane	10 U		25	0	10.000 U	10 U	5
Methylene Chloride	5 U	5U#	25	6	44 +	1 J	8 +
Acetone	10 U	10U#	25	2	130 +	3 J	13 +
Carbon Disulfide	5 U	5U#	25	0	5.0000 U	5.0 U	3
1,1-Dichloroethene	5 U	7	28	1	143 +	1 J	7 +
1,1-Dichloroethane	5 U	5U#	25	1	6 J +	1 J	3
1,2-Dichloroethene (total)	5 U	5U#	24	0	5.0000 U	5 U	3
Chloroform	5 U	1U	28	15	79 +	1 J	18 +
1,2-Dichloroethane	5 U	5	28	0	5.0000 U	5 U	3
2-Butanone	10 U		25	0	10.000 U	10 U	5
1,1,1-Trichloroethane	5 U	200	28	0	33	5 U	5
Carbon Tetrachloride	5 U	5	28	14	173 +	3 J	24 +
Vinyl Acetate	10 U		25	0	10.000 U	10 U	5
Bromodichloromethane	5 U		25	5	2 J	2 J	2
1,2-Dichloropropane	5 U		25	0	5.0000 U	5.0 U	3
cis-1,3-Dichloropropene	5 U		25	0	5.0000 U	5.0 U	3
Trichloroethene	5 U	5	28	14	140 +	3 J	29 +
Dibromochloromethane	5 U		25	0	5.0000 U	5.0 U	3
1,1,2-Trichloroethane	5 U	5U	28	0	5.0000 U	5 U	3
Benzene	5 U	5U	25	0	5.0000 U	5.0 U	3
Trans-1,3-Dichloropropene	5 U		25	0	5.0000 U	5.0 U	3
Bromoform	5 U		25	0	5.0000 U	5.0 U	3
4-Methyl-2-pentanone	10 U		25	0	10.000 U	10 U	5
2-Hexanone	10 U		25	0	10.000 U	10 U	5
Tetrachloroethene	5 U	1U	28	15	280 +	1 J	39 +
1,1,2,2-Tetrachloroethane	5 U	1U	25	0	5.0000 U	5.0 U +	3 +
Toluene	5 U	2000	25	0	12	1 J	3
Chlorobenzene	5 U		25	0	5.0000 U	5.0 U	3
Ethylbenzene	5 U		25	0	5.0000 U	5.0 U	3
Styrene	5 U		25	0	5.0000 U	5.0 U	3
Total Xylenes	5 U		25	0	5.0000 U	5.0 U	3

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW056, SW060, SW061, SW101

STATION 59
VOLATILE ORGANIC COMPOUND CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN ug/l

Analyte	Background Value***	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of All Values**
Chloromethane	10 U		7	0	10.000 U	10 U	5
Bromomethane	10 U		7	0	10.000 U	10 U	5
Vinyl Chloride	10 U	2	7	0	10.000 U	10 U +	5 +
Chloroethane	10 U		7	0	10.000 U	10 U	5
Methylene Chloride	5 U	5U#	7	2	20 JB +	2 JB	6 +
Acetone	10 U	10U#	7	1	13 B +	3 J	6
Carbon Disulfide	5 U	5U#	7	0	5.0000 U	5.0 U	3
1,1-Dichloroethene	5 U	7	8	2	133 +	3 J	21 +
1,1-Dichloroethane	5 U	5U#	7	1	6 J +	2 J	3
1,2-Dichloroethene (total)	5 U	5U#	7	1	56 +	5 U	10 +
Chloroform	5 U	1U	8	8	82 +	18.7 +	38 +
1,2-Dichloroethane	5 U	5	8	0	5.0000 U	5 U	3
2-Butanone	10 U		7	0	10.000 U	10 U	5
1,1,1-Trichloroethane	5 U	200	8	0	42	5 U	16
Carbon Tetrachloride	5 U	5	8	8	605 +	160 +	284 +
Vinyl Acetate	10 U		7	0	10.000 U	10 U	5
Bromodichloromethane	5 U		7	0	5.0000 U	5.0 U	3
1,2-Dichloropropane	5 U		7	0	5.0000 U	5.0 U	3
cis-1,3-Dichloropropene	5 U		7	0	5.0000 U	5.0 U	3
Trichloroethene	5 U	5	8	8	260 +	49 +	98 +
Dibromochloromethane	5 U		7	0	5.0000 U	5.0 U	3
1,1,2-Trichloroethane	5 U	5U	8	0	5.0000 U	5 U	3
Benzene	5 U	5U	7	0	5.0000 U	5.0 U	3
Trans-1,3-Dichloropropene	5 U		7	0	5.0000 U	5.0 U	3
Bromoform	5 U		7	0	5.0000 U	5.0 U	3
4-Methyl-2-pentanone	10 U		7	0	10.000 U	10 U	5
2-Hexanone	10 U		7	0	10.000 U	10 U	5
Tetrachloroethene	5 U	1U	8	8	270 +	43 +	94 +
1,1,2,2-Tetrachloroethane	5 U	1U	7	0	5.0000 U	5.0 U +	3 +
Toluene	5 U	2000	7	0	5.0000 U	5.0 U	3
Chlorobenzene	5 U		7	0	5.0000 U	5.0 U	3
Ethylbenzene	5 U		7	0	5.0000 U	5.0 U	3
Styrene	5 U		7	0	5.0000 U	5.0 U	3
Total Xylenes	5 U		7	0	5.0000 U	5.0 U	3

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW059

STATION 63
VOLATILE ORGANIC COMPOUND CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN ug/l

Analyte	Background Value***	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of All Values**
Chloromethane	10 U		1	0	10.000 U	10 U	5
Bromomethane	10 U		1	0	10.000 U	10 U	5
Vinyl Chloride	10 U	2	1	0	10.000 U	10 U +	5 +
Chloroethane	10 U		1	0	10.000 U	10 U	5
Methylene Chloride	5 U	5U#	1	0	5.0000 U	5.0 U	3
Acetone	10 U	10U#	1	0	10.000 U	10 U	5
Carbon Disulfide	5 U	5U#	1	0	5.0000 U	5.0 U	3
1,1-Dichloroethene	5 U	7	2	0	5.0000 U	5 U	3
1,1-Dichloroethane	5 U	5U#	1	0	5.0000 U	5.0 U	3
1,2-Dichloroethene (total)	5 U	5U#	1	0	5.0000 U	5 U	3
Chloroform	5 U	1U	2	1	13 +	5 U +	8 +
1,2-Dichloroethane	5 U	5	2	0	5.0000 U	5 U	3
2-Butanone	10 U		1	0	10.000 U	10 U	5
1,1,1-Trichloroethane	5 U	200	2	0	5.0000 U	5 U	3
Carbon Tetrachloride	5 U	5	2	1	17 +	5 U	10 +
Vinyl Acetate	10 U		1	0	10.000 U	10 U	5
Bromodichloromethane	5 U		1	0	5.0000 U	5.0 U	3
1,2-Dichloropropane	5 U		1	0	5.0000 U	5.0 U	3
cis-1,3-Dichloropropene	5 U		1	0	5.0000 U	5.0 U	3
Trichloroethene	5 U	5	2	1	14 +	5 U	8 +
Dibromochloromethane	5 U		1	0	5.0000 U	5.0 U	3
1,1,2-Trichloroethane	5 U	5U	2	0	5.0000 U	5 U	3
Benzene	5 U	5U	1	0	5.0000 U	5.0 U	3
Trans-1,3-Dichloropropene	5 U		1	0	5.0000 U	5.0 U	3
Bromoform	5 U		1	0	5.0000 U	5.0 U	3
4-Methyl-2-pentanone	10 U		1	0	10.000 U	10 U	5
2-Hexanone	10 U		1	0	10.000 U	10 U	5
Tetrachloroethene	5 U	1U	2	0	1.0 J	1.0 J	2 +
1,1,2,2-Tetrachloroethane	5 U	1U	1	0	5.0000 U	5.0 U +	3 +
Toluene	5 U	2000	1	0	5.0000 U	5.0 U	3
Chlorobenzene	5 U		1	0	5.0000 U	5.0 U	3
Ethylbenzene	5 U		1	0	5.0000 U	5.0 U	3
Styrene	5 U		1	0	5.0000 U	5.0 U	3
Total Xylenes	5 U		1	0	5.0000 U	5.0 U	3

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW063

STATION 64
VOLATILE ORGANIC COMPOUND CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN ug/l

Analyte	Background Value***		ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value		Minimum Value		Average of All Values**
Chloromethane	10	U		3	0	10.000	U	10	U	5
Bromomethane	10	U		3	0	10.000	U	10	U	5
Vinyl Chloride	10	U	2	3	0	10.000	U	10	U +	5 +
Chloroethane	10	U		3	0	10.000	U	10	U	5
Methylene Chloride	5	U	5U#	3	1	9	B +	5	U	5
Acetone	10	U	10U#	3	0	5	J	2	J	4
Carbon Disulfide	5	U	5U#	3	1	6 +		5	U	4
1,1-Dichloroethene	5	U	7	4	0	5.0000	U	5	U	3
1,1-Dichloroethane	5	U	5U#	3	0	5.0000	U	5	U	3
1,2-Dichloroethene (total)	5	U	5U#	3	0	5.0000	U	5	U	3
Chloroform	5	U	1U	4	1	27 +		1	J	8 +
1,2-Dichloroethane	5	U	5	4	0	5.0000	U	5	U	3
2-Butanone	10	U		3	0	10.000	U	10	U	5
1,1,1-Trichloroethane	5	U	200	4	0	5.0000	U	5	U	3
Carbon Tetrachloride	5	U	5	4	0	3	J	3	J	3
Vinyl Acetate	10	U		3	0	10.000	U	10	U	5
Bromodichloromethane	5	U		3	0	5.0000	U	5	U	3
1,2-Dichloropropane	5	U		3	0	5.0000	U	5	U	3
cis-1,3-Dichloropropene	5	U		3	0	5.0000	U	5	U	3
Trichloroethene	5	U	5	4	3	20 +		5	U	13 +
Dibromochloromethane	5	U		3	0	5.0000	U	5	U	3
1,1,2-Trichloroethane	5	U	5U	4	0	5.0000	U	5	U	3
Benzene	5	U	5U	3	0	5.0000	U	5	U	3
Trans-1,3-Dichloropropene	5	U		3	0	5.0000	U	5	U	3
Bromoform	5	U		3	0	5.0000	U	5	U	3
4-Methyl-2-pentanone	10	U		3	0	10.000	U	10	U	5
2-Hexanone	10	U		3	0	10.000	U	10	U	5
Tetrachloroethene	5	U	1U	4	0	5.0000	U	5	U +	3 +
1,1,2,2-Tetrachloroethane	5	U	1U	3	0	5.0000	U	5	U +	3 +
Toluene	5	U	2000	3	0	5.0000	U	5	U	3
Chlorobenzene	5	U		3	0	5.0000	U	5	U	3
Ethylbenzene	5	U		3	0	5.0000	U	5	U	3
Styrene	5	U		3	0	5.0000	U	5	U	3
Total Xylenes	5	U		3	0	5.0000	U	5	U	3

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW064

STATION 103
VOLATILE ORGANIC COMPOUND CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN ug/l

Analyte	Background Value***	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of All Values**
Chloromethane	10 U		6	0	10.000 U	10 U	5
Bromomethane	10 U		6	0	10.000 U	10 U	5
Vinyl Chloride	10 U	2	6	0	10.000 U	10 U +	5 +
Chloroethane	10 U		6	0	10.000 U	10 U	5
Methylene Chloride	5 U	5U#	6	2	9 B +	5 U	5 +
Acetone	10 U	10U#	6	0	2 JB	2 JB	5
Carbon Disulfide	5 U	5U#	6	0	5.0000 U	5 U	3
1,1-Dichloroethene	5 U	7	6	0	5.0000 U	5 U	3
1,1-Dichloroethane	5 U	5U#	6	0	5.0000 U	5 U	3
1,2-Dichloroethene (total)	5 U	5U#	5	0	5.0000 U	5 U	3
Chloroform	5 U	1U	6	0	5.0000 U	5 U +	3 +
1,2-Dichloroethane	5 U	5	6	0	5.0000 U	5 U	3
2-Butanone	10 U		6	0	10.000 U	10 U	5
1,1,1-Trichloroethane	5 U	200	6	0	5.0000 U	5 U	3
Carbon Tetrachloride	5 U	5	6	5	10 +	5 U	7 +
Vinyl Acetate	10 U		6	0	10.000 U	10 U	5
Bromodichloromethane	5 U		6	0	5.0000 U	5 U	3
1,2-Dichloropropane	5 U		6	0	5.0000 U	5 U	3
cis-1,3-Dichloropropene	5 U		6	0	5.0000 U	5 U	3
Trichloroethene	5 U	5	6	0	2 J	1 J	2
Dibromochloromethane	5 U		6	0	5.0000 U	5 U	3
1,1,2-Trichloroethane	5 U	5U	6	0	5.0000 U	5 U	3
Benzene	5 U	5U	6	0	5.0000 U	5 U	3
Trans-1,3-Dichloropropene	5 U		6	0	5.0000 U	5 U	3
Bromoform	5 U		6	0	5.0000 U	5 U	3
4-Methyl-2-pentanone	10 U		6	0	10.000 U	10 U	5
2-Hexanone	10 U		6	0	10.000 U	10 U	5
Tetrachloroethene	5 U	1U	6	4	3 J +	1 J	2 +
1,1,2,2-Tetrachloroethane	5 U	1U	6	0	5.0000 U	5 U +	3 +
Toluene	5 U	2000	6	0	5.0000 U	5 U	3
Chlorobenzene	5 U		6	0	5.0000 U	5 U	3
Ethylbenzene	5 U		6	0	5.0000 U	5 U	3
Styrene	5 U		6	0	5.0000 U	5 U	3
Total Xylenes	5 U		6	0	5.0000 U	5 U	3

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW103

903-PAD AND LIP SITE
DISSOLVED METAL CONSTITUENT CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN mg/l

Analyte	Detection Limit***	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of** All Values
Aluminum (Al)	0.0290	0.4850 *	5.0	24	0	.899	.0300 U	0.1417
Antimony (Sb)	0.0600	0.0600 U	0.06U	18	0	0.0600 U	.040 U	0.0300
Arsenic (As)	0.0100	0.0100 U	0.25U	18	0	0.0100 U	.0020 U	0.0050
Barium (Ba)	0.0100	0.2000 U	1.0	24	0	0.6	.200 U	0.2035
Beryllium (Be)	0.0050	0.0050 U	0.005	18	0	0.0050 U	.0020 U	0.0025
Cadmium (Cd)	0.0050	0.0050 U	0.01	18	0	0.0050 U	.0040 U	0.0025
Calcium (Ca)	0.7500	85.9230	NS	24	0	156	72.30	116
Cesium (Cs)	0.0200	1.0000 U	1.0	13	0	0.0200 U	.0010 U	0.0100
Chromium (Cr)	0.0100	0.0100 U	0.05	24	0	0.0100 U	0.01 U	0.0050
Cobalt (Co)	0.0220	0.0500 U	0.05	24	0	0.0220 U	.0200 U	0.0110
Copper (Cu)	0.0063	0.0250 U	0.2	24	0	.0279	.0200 U	0.0057
Iron (Fe)	0.0069	1.7800 *	0.3	24	4	1.48 +	.0554	0.1581
Lead (Pb)	0.0050	0.0055 *	0.05	18	0	.0126	.0020 U	0.0031
Lithium (Li)	0.1000	0.1000 U	2.5	13	0	.179	.0795	0.0662
Magnesium (Mg)	0.0500	12.8150	NS	24	0	28.30	7.54	16
Manganese (Mn)	0.0051	0.3680 *	0.05	24	17	1.64 +	0.015 U	0.2427 +
Mercury (Hg)	0.0002	0.0003 *	0.002	18	0	.0003	.0002 U	0.0001
Molybdenum(Mo)	0.0220	0.1000 U	0.1	19	0	.0201	.0201	0.0112
Nickel (Ni)	0.0370	0.0400 U	0.20	24	0	0.0370 U	.0200 U	0.0185
Potassium (K)	0.5000	5.0000 U	NS	18	0	9.04	2.42	1.0591
Selenium (Se)	0.0050	0.0050 U	0.01	18	1	.0134 +	.0020 U	0.0031
Silver (Ag)	0.0076	0.0100 U	0.05	24	0	0.0076 U	0.01 U	0.0038
Sodium (Na)	2.1000	46.2450	NS	24	0	88.50	7.04	28
Strontium (Sr)	0.0200	0.3960	NS	24	0	.918	.389	0.4180
Thallium (Tl)	0.0100	0.0100 U	0.01U	18	0	0.0100 U	.0030 U	0.0050
Tin (Sn)	0.1000	0.1000 U	0.1	13	0	0.1000 U	.100 U	0.0500
Vanadium (V)	0.0240	0.0500 U	0.1	24	0	0.0240 U	.0100 U	0.0120
Zinc (Zn)	0.0200	0.0320 *	2.0	24	0	1.26	0.02 U	0.1229

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW050, SW051, SW052, SW055, SW057, SW058, SW077

STATION 53
DISSOLVED METAL CONSTITUENT CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN mg/l

Analyte	Detection Limit***	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of** All Values
Aluminum (Al)	0.0290	0.4850 *	5.0	8	0	.245	0.2 U	0.0433
Antimony (Sb)	0.0600	0.0600 U	0.06U	7	1	.133 +	.040 U	0.0447
Arsenic (As)	0.0100	0.0100 U	0.25U	7	0	0.0100 U	.010 U	0.0050
Barium (Ba)	0.0100	0.2000 U	1.0	8	0	.325	0.2 U	0.0981
Beryllium (Be)	0.0050	0.0050 U	0.005	7	0	0.0050 U	.005 U	0.0025
Cadmium (Cd)	0.0050	0.0050 U	0.01	7	0	0.0050 U	.005 U	0.0025
Calcium (Ca)	0.7500	85.9230	NS	8	0	140	80.0	114
Cesium (Cs)	0.0200	1.0000 U	1.0	6	0	0.0200 U	.100 U	0.0100
Chromium (Cr)	0.0100	0.0100 U	0.05	8	0	0.0100 U	0.01 U	0.0050
Cobalt (Co)	0.0220	0.0500 U	0.05	8	0	0.0220 U	0.05 U	0.0110
Copper (Cu)	0.0063	0.0250 U	0.2	8	0	.0274	0.025 U	0.0062
Iron (Fe)	0.0069	1.7800 *	0.3	8	6	8.54 +	0.1 U	2.4196 +
Lead (Pb)	0.0050	0.0055 *	0.05	7	0	0.0050 U	.0030 U	0.0025
Lithium (Li)	0.1000	0.1000 U	2.5	5	0	.0232	.0232	0.0446
Magnesium (Mg)	0.0500	12.8150	NS	8	0	32.2	21.50	27
Manganese (Mn)	0.0051	0.3680 *	0.05	8	8	.706 +	0.087 +	0.4495 +
Mercury (Hg)	0.0002	0.0003 *	0.002	7	0	0.0002 U	.0002 U	0.0001
Molybdenum(Mo)	0.0220	0.1000 U	0.1	6	0	0.0220 U	.0100 U	0.0110
Nickel (Ni)	0.0370	0.0400 U	0.20	8	0	0.0370 U	0.04 U	0.0185
Potassium (K)	0.5000	5.0000 U	NS	7	0	6.36	5 U	1.1229
Selenium (Se)	0.0050	0.0050 U	0.01	7	0	0.0050 U	.005 U	0.0025
Silver (Ag)	0.0076	0.0100 U	0.05	8	0	0.0076 U	0.01 U	0.0038
Sodium (Na)	2.1000	46.2450	NS	8	0	113	14.30	30
Strontium (Sr)	0.0200	0.3960	NS	7	0	.817	0.69	0.4389
Thallium (Tl)	0.0100	0.0100 U	0.01U	7	0	0.0100 U	.0100 U	0.0050
Tin (Sn)	0.1000	0.1000 U	0.1	5	0	0.1000 U	.100 U	0.0500
Vanadium (V)	0.0240	0.0500 U	0.1	8	0	0.0240 U	0.05 U	0.0120
Zinc (Zn)	0.0200	0.0320 *	2.0	8	0	.0371	0.02 U	0.0180

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW053

SOUTH WALNUT CREEK
DISSOLVED METAL CONSTITUENT CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN mg/l

Analyte	Detection Limit***	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of** All Values
Aluminum (Al)	0.0290	0.4850 *	5.0	27	0	0.0290 U	.0300 U	0.0145
Antimony (Sb)	0.0600	0.0600 U	0.06U	24	0	0.0600 U	0.060 U	0.0300
Arsenic (As)	0.0100	0.0100 U	0.25U	24	0	0.0100 U	.0020 U	0.0050
Barium (Ba)	0.0100	0.2000 U	1.0	27	0	.235	.163	0.0580
Beryllium (Be)	0.0050	0.0050 U	0.005	24	1	.0053 +	.0020 U	0.0026
Cadmium (Cd)	0.0050	0.0050 U	0.01	24	0	0.0050 U	.0040 U	0.0025
Calcium (Ca)	0.7500	85.9230	NS	27	0	137	7.72	74
Cesium (Cs)	0.0200	1.0000 U	1.0	20	0	0.0200 U	.0010 U	0.0100
Chromium (Cr)	0.0100	0.0100 U	0.05	27	0	0.0100 U	0.01 U	0.0050
Cobalt (Co)	0.0220	0.0500 U	0.05	27	0	0.0220 U	.0200 U	0.0110
Copper (Cu)	0.0063	0.0250 U	0.2	27	0	0.0063 U	.0200 U	0.0032
Iron (Fe)	0.0069	1.7800 *	0.3	27	0	0.2	.0302	0.0374
Lead (Pb)	0.0050	0.0055 *	0.05	24	0	.0054	.0020 U	0.0026
Lithium (Li)	0.1000	0.1000 U	2.5	20	0	.0200	.0100 U	0.0462
Magnesium (Mg)	0.0500	12.8150	NS	27	0	23	5.0 U	12
Manganese (Mn)	0.0051	0.3680 *	0.05	27	8	.643 +	.0100 U	0.1014 +
Mercury (Hg)	0.0002	0.0003 *	0.002	24	0	0.0007	.0002 U	0.0002
Molybdenum(Mo)	0.0220	0.1000 U	0.1	23	0	.0245	.0100 U	0.0116
Nickel (Ni)	0.0370	0.0400 U	0.20	27	0	0.0370 U	.0200 U	0.0185
Potassium (K)	0.5000	5.0000 U	NS	24	0	1.12	.589	0.2905
Selenium (Se)	0.0050	0.0050 U	0.01	24	0	.0050	.0020 U	0.0026
Silver (Ag)	0.0076	0.0100 U	0.05	27	0	0.0076 U	0.01 U	0.0038
Sodium (Na)	2.1000	46.2450	NS	27	0	60.5	5 U	30
Strontium (Sr)	0.0200	0.3960	NS	27	0	0.8	0.02 U	0.1936
Thallium (Tl)	0.0100	0.0100 U	0.01U	24	0	0.0100 U	.0030 U	0.0050
Tin (Sn)	0.1000	0.1000 U	0.1	20	1	1 +	.100 U	0.0797
Vanadium (V)	0.0240	0.0500 U	0.1	27	0	0.0240 U	.0100 U	0.0120
Zinc (Zn)	0.0200	0.0320 *	2.0	27	0	0.59	0.010	0.1168

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW056, SW060, SW061, SW101

STATION 59
DISSOLVED METAL CONSTITUENT CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN mg/l

Analyte	Detection Limit***	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of** All Values
Aluminum (Al)	0.0290	0.4850 *	5.0	8	0	0.0290 U	.0300 U	0.0145
Antimony (Sb)	0.0600	0.0600 U	0.06U	7	0	0.0600 U	0.060 U	0.0300
Arsenic (As)	0.0100	0.0100 U	0.25U	7	0	0.0100 U	.0020 U	0.0050
Barium (Ba)	0.0100	0.2000 U	1.0	8	0	.200	.162	0.0490
Beryllium (Be)	0.0050	0.0050 U	0.005	7	0	0.0050 U	.0020 U	0.0025
Cadmium (Cd)	0.0050	0.0050 U	0.01	7	0	0.0050 U	.0040 U	0.0025
Calcium (Ca)	0.7500	85.9230	NS	8	0	122	88.30	109
Cesium (Cs)	0.0200	1.0000 U	1.0	6	0	0.0200 U	.0010 U	0.0100
Chromium (Cr)	0.0100	0.0100 U	0.05	8	0	0.0100 U	0.01 U	0.0050
Cobalt (Co)	0.0220	0.0500 U	0.05	8	0	0.0220 U	.0200 U	0.0110
Copper (Cu)	0.0063	0.0250 U	0.2	8	0	.0288	.0200 U	0.0064
Iron (Fe)	0.0069	1.7800 *	0.3	8	0	.123	.0361	0.0225
Lead (Pb)	0.0050	0.0055 *	0.05	7	0	0.0050 U	.0020 U	0.0025
Lithium (Li)	0.1000	0.1000 U	2.5	6	0	.0250	.0142	0.0399
Magnesium (Mg)	0.0500	12.8150	NS	8	0	29.10	20	23
Manganese (Mn)	0.0051	0.3680 *	0.05	8	0	.0461	.0100 U	0.0144
Mercury (Hg)	0.0002	0.0003 *	0.002	7	0	.0007	0.0002 U	0.0002
Molybdenum(Mo)	0.0220	0.1000 U	0.1	7	0	0.0220 U	.0100 U	0.0110
Nickel (Ni)	0.0370	0.0400 U	0.20	8	0	0.0370 U	.0200 U	0.0185
Potassium (K)	0.5000	5.0000 U	NS	7	0	.750	.750	0.3214
Selenium (Se)	0.0050	0.0050 U	0.01	7	0	0.0050 U	.0020 U	0.0025
Silver (Ag)	0.0076	0.0100 U	0.05	8	0	0.0076 U	0.01 U	0.0038
Sodium (Na)	2.1000	46.2450	NS	8	0	38.30	28	34
Strontium (Sr)	0.0200	0.3960	NS	8	0	1.17	.614	0.5650
Thallium (Tl)	0.0100	0.0100 U	0.01U	7	0	0.0100 U	.0030 U	0.0050
Tin (Sn)	0.1000	0.1000 U	0.1	6	0	0.1000 U	.100 U	0.0500
Vanadium (V)	0.0240	0.0500 U	0.1	8	0	0.0240 U	.0100 U	0.0120
Zinc (Zn)	0.0200	0.0320 *	2.0	8	0	.626	.0200	0.2212

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW059

STATION 63
DISSOLVED METAL CONSTITUENT CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN mg/l

Analyte	Detection Limit***	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of** All Values
Aluminum (Al)	0.0290	0.4850 *	5.0	2	0	0.033	0.033	0.0238
Antimony (Sb)	0.0600	0.0600 U	0.06U	1	0	0.0600 U	0.500 U +	0.0300
Arsenic (As)	0.0100	0.0100 U	0.25U	1	0	0.003	0.003	0.0030
Barium (Ba)	0.0100	0.2000 U	1.0	2	0	0.104	0.104	0.0545
Beryllium (Be)	0.0050	0.0050 U	0.005	1	0	0.0050 U	0.002 U	0.0025
Cadmium (Cd)	0.0050	0.0050 U	0.01	1	0	0.0050 U	0.004 U	0.0025
Calcium (Ca)	0.7500	85.9230	NS	2	0	112	93.0	103
Cesium (Cs)	0.0200	1.0000 U	1.0	0	0			*******
Chromium (Cr)	0.0100	0.0100 U	0.05	2	0	0.0100 U	0.01 U	0.0050
Cobalt (Co)	0.0220	0.0500 U	0.05	2	0	0.0220 U	0.020 U	0.0110
Copper (Cu)	0.0063	0.0250 U	0.2	2	0	0.0063 U	0.020 U	0.0032
Iron (Fe)	0.0069	1.7800 *	0.3	2	0	0.062	0.062	0.0327
Lead (Pb)	0.0050	0.0055 *	0.05	1	0	0.005	0.005	0.0050
Lithium (Li)	0.1000	0.1000 U	2.5	0	0			*******
Magnesium (Mg)	0.0500	12.8150	NS	2	0	34.0	32.2	33
Manganese (Mn)	0.0051	0.3680 *	0.05	2	2	0.412 +	0.393 +	0.4025 +
Mercury (Hg)	0.0002	0.0003 *	0.002	1	0	0.0002 U	0.0002 U	0.0001
Molybdenum(Mo)	0.0220	0.1000 U	0.1	1	0	0.0220 U	0.04 U	0.0110
Nickel (Ni)	0.0370	0.0400 U	0.20	2	0	0.0370 U	0.020 U	0.0185
Potassium (K)	0.5000	5.0000 U	NS	1	0	1.54	1.54	1.5400
Selenium (Se)	0.0050	0.0050 U	0.01	1	0	0.0050 U	0.005 U	0.0025
Silver (Ag)	0.0076	0.0100 U	0.05	2	0	0.0076 U	0.01 U	0.0038
Sodium (Na)	2.1000	46.2450	NS	2	0	110	102	106
Strontium (Sr)	0.0200	0.3960	NS	2	0	1.25	1.07	1.1600
Thallium (Tl)	0.0100	0.0100 U	0.01U	1	0	0.0100 U	0.300 U +	0.0050
Tin (Sn)	0.1000	0.1000 U	0.1	0	0			*******
Vanadium (V)	0.0240	0.0500 U	0.1	2	0	0.0240 U	0.010 U	0.0120
Zinc (Zn)	0.0200	0.0320 *	2.0	2	0	0.03	0.028	0.0290

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SWD63

STATION 64
DISSOLVED METAL CONSTITUENT CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN mg/l

Analyte	Detection Limit***	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of** All Values
Aluminum (Al)	0.0290	0.4850 *	5.0	4	0	0.049	0.049	0.0231
Antimony (Sb)	0.0600	0.0600 U	0.06U	3	0	0.0600 U	.0600 U	0.0300
Arsenic (As)	0.0100	0.0100 U	0.25U	3	0	0.0100 U	0.002 U	0.0050
Barium (Ba)	0.0100	0.2000 U	1.0	4	0	0.105	0.105	0.0300
Beryllium (Be)	0.0050	0.0050 U	0.005	3	0	0.0050 U	0.002 U	0.0025
Cadmium (Cd)	0.0050	0.0050 U	0.01	3	0	0.0050 U	0.004 U	0.0025
Calcium (Ca)	0.7500	85.9230	NS	4	0	71.60	45.8	60
Cesium (Cs)	0.0200	1.0000 U	1.0	2	0	0.0200 U	.100 U	0.0100
Chromium (Cr)	0.0100	0.0100 U	0.05	4	0	0.0100 U	0.01 U	0.0050
Cobalt (Co)	0.0220	0.0500 U	0.05	4	0	0.0220 U	0.020 U	0.0110
Copper (Cu)	0.0063	0.0250 U	0.2	4	0	0.0063 U	0.020 U	0.0032
Iron (Fe)	0.0069	1.7800 *	0.3	4	0	0.059	0.059	0.0173
Lead (Pb)	0.0050	0.0055 *	0.05	3	0	0.0050 U	0.004 U	0.0025
Lithium (Li)	0.1000	0.1000 U	2.5	2	0	.0946	.0946	0.0723
Magnesium (Mg)	0.0500	12.8150	NS	4	0	54.2	45.30	50
Manganese (Mn)	0.0051	0.3680 *	0.05	4	1	0.074 +	0.015 U	0.0355
Mercury (Hg)	0.0002	0.0003 *	0.002	3	0	0.0002 U	0.0002 U	0.0001
Molybdenum (Mo)	0.0220	0.1000 U	0.1	3	0	0.0220 U	.0100 U	0.0110
Nickel (Ni)	0.0370	0.0400 U	0.20	4	0	0.0370 U	0.020 U	0.0185
Potassium (K)	0.5000	5.0000 U	NS	3	0	1.38	1.38	0.6267
Selenium (Se)	0.0050	0.0050 U	0.01	3	1	.0130 +	0.005 U	0.0060
Silver (Ag)	0.0076	0.0100 U	0.05	4	0	0.0076 U	0.01 U	0.0038
Sodium (Na)	2.1000	46.2450	NS	4	0	110	103	106
Strontium (Sr)	0.0200	0.3960	NS	4	0	1.17	1.02	1.1075
Thallium (Tl)	0.0100	0.0100 U	0.01U	3	0	0.0100 U	.0100 U	0.0050
Tin (Sn)	0.1000	0.1000 U	0.1	2	0	0.1000 U	.100 U	0.0500
Vanadium (V)	0.0240	0.0500 U	0.1	4	0	0.0240 U	0.010 U	0.0120
Zinc (Zn)	0.0200	0.0320 *	2.0	4	0	.0320	0.02 U	0.0183

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW064

STATION 103
DISSOLVED METAL CONSTITUENT CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN mg/l

Analyte	Detection Limit***	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of** All Values
Aluminum (Al)	0.0290	0.4850 *	5.0	6	0	0.035	.0300 U	0.0179
Antimony (Sb)	0.0600	0.0600 U	0.06U	6	0	0.0600 U	.0600 U	0.0300
Arsenic (As)	0.0100	0.0100 U	0.25U	6	0	0.0100 U	0.002 U	0.0050
Barium (Ba)	0.0100	0.2000 U	1.0	6	0	.200	.151	0.0890
Beryllium (Be)	0.0050	0.0050 U	0.005	6	0	0.0050 U	0.002 U	0.0025
Cadmium (Cd)	0.0050	0.0050 U	0.01	6	0	0.0050 U	0.004 U	0.0025
Calcium (Ca)	0.7500	85.9230	NS	6	0	121	99.6	111
Cesium (Cs)	0.0200	1.0000 U	1.0	5	0	0.0200 U	.0010 U	0.0100
Chromium (Cr)	0.0100	0.0100 U	0.05	6	0	0.0100 U	.0100 U	0.0050
Cobalt (Co)	0.0220	0.0500 U	0.05	6	0	0.0220 U	0.020 U	0.0110
Copper (Cu)	0.0063	0.0250 U	0.2	6	0	0.0063 U	0.020 U	0.0032
Iron (Fe)	0.0069	1.7800 *	0.3	6	0	.156	0.061	0.0521
Lead (Pb)	0.0050	0.0055 *	0.05	6	0	0.0050 U	.0020 U	0.0025
Lithium (Li)	0.1000	0.1000 U	2.5	5	0	.0160	.0100 U	0.0432
Magnesium (Mg)	0.0500	12.8150	NS	6	0	12.60	5 U	9.9708
Manganese (Mn)	0.0051	0.3680 *	0.05	6	2	.0730 +	0.010 U	0.0355
Mercury (Hg)	0.0002	0.0003 *	0.002	6	0	.0007	0.0002 U	0.0003
Molybdenum(Mo)	0.0220	0.1000 U	0.1	5	0	0.0220 U	.0100 U	0.0110
Nickel (Ni)	0.0370	0.0400 U	0.20	6	0	0.0370 U	0.020 U	0.0185
Potassium (K)	0.5000	5.0000 U	NS	6	0	0.853	.547	0.4000
Selenium (Se)	0.0050	0.0050 U	0.01	6	0	0.0050 U	.0020 U	0.0025
Silver (Ag)	0.0076	0.0100 U	0.05	6	0	0.0076 U	.0100 U	0.0038
Sodium (Na)	2.1000	46.2450	NS	6	0	14.20	5 U	11
Strontium (Sr)	0.0200	0.3960	NS	6	0	.421	0.395	0.2110
Thallium (Tl)	0.0100	0.0100 U	0.01U	6	0	0.0100 U	.0030 U	0.0050
Tin (Sn)	0.1000	0.1000 U	0.1	5	0	0.1000 U	.100 U	0.0500
Vanadium (V)	0.0240	0.0500 U	0.1	6	0	0.0240 U	0.010 U	0.0120
Zinc (Zn)	0.0200	0.0320 *	2.0	6	0	.0270	.0200 U	0.0152

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW103

903-PAD AND LIP SITE
TOTAL METAL CONSTITUENT CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN mg/l

Analyte	Detection Limit***	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of** All Values
Aluminum (Al)	0.2000	0.9160 *	0.2U	18	15	28.30 +	.0002 U	4.3912 +
Antimony (Sb)	0.0600	0.0600 U	0.064U#	18	0	0.0600 U	.00004 U	0.0300
Arsenic (As)	0.0100	0.0100 U	0.05	18	0	.0024	.00001 U	0.0049
Barium (Ba)	0.2000	0.2000 U	1.0	18	0	.573	.0003	0.2274
Beryllium (Be)	0.0050	0.0050 U	0.1	18	0	.0069	.0020 U	0.0026
Cadmium (Cd)	0.0050	0.0050 U	0.01	18	0	0.0050 U	.0040 U	0.0025
Calcium (Ca)	5.0000	85.0080		18	0	156	.109	96
Cesium (Cs)	1.0000	1.0000 U	1.0U#	13	0	1.0000 U	.0010 U	0.5000
Chromium (Cr)	0.0100	0.0100 U	0.05	18	0	.0288	.00001 U	0.0083
Cobalt (Co)	0.0500	0.0500 U	0.05U	18	0	0.0500 U	.00005 U	0.0250
Copper (Cu)	0.0250	0.0250 U	0.2	18	0	.0570	.00003 U	0.0172
Iron (Fe)	0.1000	3.1670	1.0	18	10	26.70 +	.0001 U	5.1458 +
Lead (Pb)	0.0050	0.0050 U	0.05	18	1	.0576 +	.0030 U	0.0147
Lithium (Li)	0.1000	0.1000 U	2.5	13	1	3.20 +	.0831	0.1553
Magnesium (Mg)	5.0000	12.4800		18	0	31.10	.0229	15
Manganese (Mn)	0.0150	0.6360	1.0	18	0	.954	.0016	0.2222
Mercury (Hg)	0.0002	0.0010	0.002	18	0	.0006	.0002 U	0.0001
Molybdenum(Mo)	0.1000	0.1000 U	0.1	13	0	.0275	.0275	0.0494
Nickel (Ni)	0.0400	0.0400 U	0.2	18	0	.0654	.00004 U	0.0225
Potassium (K)	5.0000	5.0000 U		18	0	8.77	.0050 U	3.0231
Selenium (Se)	0.0050	0.0050 U	0.01	18	1	.0126 +	.0020 U	0.0032
Silver (Ag)	0.0100	0.0106 *	0.05	18	0	0.0100 U	.00001 U	0.0050
Sodium (Na)	5.0000	47.3620		18	0	86.90	.0592	26
Strontium (Sr)	0.2000	0.3820	NS	18	0	.879	.0006	0.3138
Thallium (Tl)	0.0100	0.0500 U	0.05U	18	0	0.0100 U	.00001 U	0.0050
Tin (Sn)	0.2000	0.1000 U	0.1U	13	2	.141 +	.100 U	0.1020 +
Vanadium (V)	0.0500	0.0500 U	0.1	18	0	.0852	.00005 U	0.0282
Zinc (Zn)	0.0200	0.0276	2.0	18	2	2.84 +	.00003	0.2829

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW050, SW051, SW052, SW055, SW057, SW058, SW077

STATION 53
TOTAL METAL CONSTITUENT CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN mg/l

Analyte	Detection Limit***	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of** All Values
Aluminum (Al)	0.2000	0.9160 *	0.2U	6	4	6.62 +	.200 U	1.7060 +
Antimony (Sb)	0.0600	0.0600 U	0.064U#	6	0	0.0600 U	.040 U	0.0300
Arsenic (As)	0.0100	0.0100 U	0.05	6	0	0.0100 U	.010 U	0.0050
Barium (Ba)	0.2000	0.2000 U	1.0	6	0	.448	.218	0.2727
Beryllium (Be)	0.0050	0.0050 U	0.1	6	0	.0055	.005 U	0.0030
Cadmium (Cd)	0.0050	0.0050 U	0.01	6	0	0.0050 U	.005 U	0.0025
Calcium (Ca)	5.0000	85.0080		6	0	146	116	135
Cesium (Cs)	1.0000	1.0000 U	1.0U#	5	0	1.0000 U	.100 U	0.5000
Chromium (Cr)	0.0100	0.0100 U	0.05	6	0	0.0100 U	.010 U	0.0050
Cobalt (Co)	0.0500	0.0500 U	0.05U	6	0	0.0500 U	.050 U	0.0250
Copper (Cu)	0.0250	0.0250 U	0.2	6	0	.0299	.025 U	0.0154
Iron (Fe)	0.1000	3.1670	1.0	6	6	22.30 +	5.06 +	8.8400 +
Lead (Pb)	0.0050	0.0050 U	0.05	7	1	.0623 +	.0030 U	0.0110
Lithium (Li)	0.1000	0.1000 U	2.5	5	0	.0240	.0240	0.0448
Magnesium (Mg)	5.0000	12.4800		6	0	31.30	24.60	28
Manganese (Mn)	0.0150	0.6360	1.0	6	0	.719	.467	0.5873
Mercury (Hg)	0.0002	0.0010	0.002	6	0	.0007	.0002 U	0.0002
Molybdenum (Mo)	0.1000	0.1000 U	0.1	5	0	0.1000 U	.0100 U	0.0500
Nickel (Ni)	0.0400	0.0400 U	0.2	6	0	0.0400 U	.040 U	0.0200
Potassium (K)	5.0000	5.0000 U		6	0	5.0000 U	5 U	2.5000
Selenium (Se)	0.0050	0.0050 U	0.01	6	0	0.0050 U	.005 U	0.0025
Silver (Ag)	0.0100	0.0106 *	0.05	6	0	0.0100 U	.010 U	0.0050
Sodium (Na)	5.0000	47.3620		6	0	20.90	14.70	18
Strontium (Sr)	0.2000	0.3820	NS	6	0	.847	.796	0.4575
Thallium (Tl)	0.0100	0.0500 U	0.05U	6	0	0.0100 U	.010 U	0.0050
Tin (Sn)	0.2000	0.1000 U	0.1U	5	1	.109 +	.100 U	0.1018 +
Vanadium (V)	0.0500	0.0500 U	0.1	6	0	0.0500 U	.050 U	0.0250
Zinc (Zn)	0.0200	0.0276	2.0	6	0	.121	.0200 U	0.0370

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW053

SOUTH WALNUT CREEK
TOTAL METAL CONSTITUENT CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN mg/l

Analyte	Detection Limit***	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of** All Values
Aluminum (Al)	0.2000	0.9160 *	0.2U	27	19	25.40 +	.0300 U	3.9927 +
Antimony (Sb)	0.0600	0.0600 U	0.064U#	27	0	.0611	0.060 U	0.0309
Arsenic (As)	0.0100	0.0100 U	0.05	27	0	0.0100 U	.0020 U	0.0050
Barium (Ba)	0.2000	0.2000 U	1.0	27	1	2.02 +	.170	0.2330
Beryllium (Be)	0.0050	0.0050 U	0.1	27	0	.0572	.0020 U	0.0051
Cadmium (Cd)	0.0050	0.0050 U	0.01	27	1	.0142 +	.0040 U	0.0030
Calcium (Ca)	5.0000	85.0080		27	0	152	7.73	80
Cesium (Cs)	1.0000	1.0000 U	1.0U#	23	0	1.0000 U	.0010 U	0.5000
Chromium (Cr)	0.0100	0.0100 U	0.05	27	1	.212 +	0.010 U	0.0151
Cobalt (Co)	0.0500	0.0500 U	0.05U	27	1	.132 +	.0200 U	0.0295
Copper (Cu)	0.0250	0.0250 U	0.2	27	1	.293 +	.0200 U	0.0271
Iron (Fe)	0.1000	3.1670	1.0	27	12	204 +	.0855	12 +
Lead (Pb)	0.0050	0.0050 U	0.05	27	1	.215 +	.0020 U	0.0140
Lithium (Li)	0.1000	0.1000 U	2.5	23	0	.152	.0100 U	0.0533
Magnesium (Mg)	5.0000	12.4800		27	0	36.70	5.0 U	14
Manganese (Mn)	0.0150	0.6360	1.0	27	1	3.68 +	.0100 U	0.3603
Mercury (Hg)	0.0002	0.0010	0.002	27	1	.0024 +	0.0002 U	0.0002
Molybdenum(Mo)	0.1000	0.1000 U	0.1	23	1	.174 +	.0100 U	0.0561
Nickel (Ni)	0.0400	0.0400 U	0.2	27	1	.246 +	.0200 U	0.0294
Potassium (K)	5.0000	5.0000 U		27	0	21.50	.624	3.3224
Selenium (Se)	0.0050	0.0050 U	0.01	27	0	.0059	.0020 U	0.0026
Silver (Ag)	0.0100	0.0106 *	0.05	27	0	.0117	0.010 U	0.0053
Sodium (Na)	5.0000	47.3620		27	0	58.20	5 U	29
Strontium (Sr)	0.2000	0.3820	NS	27	0	0.8	.100 U	0.2317
Thallium (Tl)	0.0100	0.0500 U	0.05U	27	0	0.0100 U	.0030 U	0.0050
Tin (Sn)	0.2000	0.1000 U	0.1U	23	0	0.2000 U	.100 U	0.1000
Vanadium (V)	0.0500	0.0500 U	0.1	27	1	.555 +	.0100 U	0.0499
Zinc (Zn)	0.0200	0.0276	2.0	27	0	1.19	.0200 U	0.2363

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW056, SW060, SW061, SW101

STATION 59
TOTAL METAL CONSTITUENT CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN mg/l

Analyte	Detection Limit***	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of** All Values
Aluminum (Al)	0.2000	0.9160 *	0.2U	7	5	22.80 +	.190	6.6900 +
Antimony (Sb)	0.0600	0.0600 U	0.064U#	7	1	.102 +	0.060 U	0.0403
Arsenic (As)	0.0100	0.0100 U	0.05	7	0	0.0100 U	.0020 U	0.0050
Barium (Ba)	0.2000	0.2000 U	1.0	7	0	.461	.166	0.2094
Beryllium (Be)	0.0050	0.0050 U	0.1	7	0	.0076	.0020 U	0.0037
Cadmium (Cd)	0.0050	0.0050 U	0.01	7	0	0.0050 U	.0040 U	0.0025
Calcium (Ca)	5.0000	85.0080		7	0	466	102	183
Cesium (Cs)	1.0000	1.0000 U	1.0U#	6	0	1.0000 U	.0010 U	0.5000
Chromium (Cr)	0.0100	0.0100 U	0.05	7	0	.0232	0.010 U	0.0090
Cobalt (Co)	0.0500	0.0500 U	0.05U	7	0	0.0500 U	.0200 U	0.0250
Copper (Cu)	0.0250	0.0250 U	0.2	7	0	.0446	.0200 U	0.0215
Iron (Fe)	0.1000	3.1670	1.0	7	4	17 +	.100 U	5.7857 +
Lead (Pb)	0.0050	0.0050 U	0.05	7	0	.0317	.0020 U	0.0124
Lithium (Li)	0.1000	0.1000 U	2.5	6	1	2.56 +	.0250	0.4608
Magnesium (Mg)	5.0000	12.4800		7	0	28.70	20.60	25
Manganese (Mn)	0.0150	0.6360	1.0	7	0	.197	.0100 U	0.0723
Mercury (Hg)	0.0002	0.0010	0.002	7	0	.0006	0.0002 U	0.0002
Molybdenum(Mo)	0.1000	0.1000 U	0.1	6	0	.0191	.0191	0.0449
Nickel (Ni)	0.0400	0.0400 U	0.2	7	0	0.0400 U	.0200 U	0.0200
Potassium (K)	5.0000	5.0000 U		7	0	.819	.819	2.2599
Selenium (Se)	0.0050	0.0050 U	0.01	7	1	.0160 +	.0020 U	0.0044
Silver (Ag)	0.0100	0.0106 *	0.05	7	0	0.0100 U	0.010 U	0.0050
Sodium (Na)	5.0000	47.3620		7	0	37.60	29	33
Strontium (Sr)	0.2000	0.3820	NS	7	0	1.36	.601	0.6096
Thallium (Tl)	0.0100	0.0500 U	0.05U	7	0	0.0100 U	.0030 U	0.0050
Tin (Sn)	0.2000	0.1000 U	0.1U	6	0	0.2000 U	.100 U	0.1000
Vanadium (V)	0.0500	0.0500 U	0.1	7	0	.0595	.0100 U	0.0347
Zinc (Zn)	0.0200	0.0276	2.0	7	1	2.66 +	.209	0.8141

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW059

STATION 63
TOTAL METAL CONSTITUENT CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN mg/l

Analyte	Detection Limit***	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of** All Values
Aluminum (Al)	0.2000	0.9160 *	0.2U	1	1	0.750 +	0.750 +	0.7500 +
Antimony (Sb)	0.0600	0.0600 U	0.064U#	1	0	0.0600 U	0.500 U +	0.0300
Arsenic (As)	0.0100	0.0100 U	0.05	1	0	0.003	0.003	0.0030
Barium (Ba)	0.2000	0.2000 U	1.0	1	0	0.107	0.107	0.1070
Beryllium (Be)	0.0050	0.0050 U	0.1	1	0	0.0050 U	0.002 U	0.0025
Cadmium (Cd)	0.0050	0.0050 U	0.01	1	0	0.0050 U	0.004 U	0.0025
Calcium (Ca)	5.0000	85.0080		1	0	94.5	94.5	95
Cesium (Cs)	1.0000	1.0000 U	1.0U#	0	0			*******
Chromium (Cr)	0.0100	0.0100 U	0.05	1	0	0.0100 U	0.020 U	0.0050
Cobalt (Co)	0.0500	0.0500 U	0.05U	1	0	0.0500 U	0.020 U	0.0250
Copper (Cu)	0.0250	0.0250 U	0.2	1	0	0.0250 U	0.020 U	0.0125
Iron (Fe)	0.1000	3.1670	1.0	1	1	1.32 +	1.32 +	1.3200 +
Lead (Pb)	0.0050	0.0050 U	0.05	1	0	0.006	0.006	0.0060
Lithium (Li)	0.1000	0.1000 U	2.5	0	0			*******
Magnesium (Mg)	5.0000	12.4800		1	0	32.0	32.0	32
Manganese (Mn)	0.0150	0.6360	1.0	1	0	0.465	0.465	0.4650
Mercury (Hg)	0.0002	0.0010	0.002	1	0	0.0002 U	0.0002 U	0.0001
Molybdenum(Mo)	0.1000	0.1000 U	0.1	0	0			*******
Nickel (Ni)	0.0400	0.0400 U	0.2	1	0	0.0400 U	0.020 U	0.0200
Potassium (K)	5.0000	5.0000 U		1	0	1.61	1.61	1.6100
Selenium (Se)	0.0050	0.0050 U	0.01	1	1	0.011 +	0.011 +	0.0110 +
Silver (Ag)	0.0100	0.0106 *	0.05	1	0	0.0100 U	0.030 U	0.0050
Sodium (Na)	5.0000	47.3620		1	0	98.4	98.4	98
Strontium (Sr)	0.2000	0.3820	NS	1	0	1.25	1.25	1.2500
Thallium (Tl)	0.0100	0.0500 U	0.05U	1	0	0.0100 U	0.300 U +	0.0050
Tin (Sn)	0.2000	0.1000 U	0.1U	0	0			*******
Vanadium (V)	0.0500	0.0500 U	0.1	1	0	0.0500 U	0.010 U	0.0250
Zinc (Zn)	0.0200	0.0276	2.0	1	0	0.0200 U	0.020 U	0.0100

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW063

STATION 64
TOTAL METAL CONSTITUENT CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN mg/l

Analyte	Detection Limit***	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of** All Values
Aluminum (Al)	0.2000	0.9160 *	0.2U	3	3	15.4 +	.446 +	5.6147 +
Antimony (Sb)	0.0600	0.0600 U	0.064U#	3	0	0.0600 U	.0600 U	0.0300
Arsenic (As)	0.0100	0.0100 U	0.05	3	0	0.006	0.006	0.0053
Barium (Ba)	0.2000	0.2000 U	1.0	3	0	0.268	.200 U	0.1560
Beryllium (Be)	0.0050	0.0050 U	0.1	3	0	0.0050 U	0.002 U	0.0025
Cadmium (Cd)	0.0050	0.0050 U	0.01	3	0	0.007	.0050 U	0.0040
Calcium (Ca)	5.0000	85.0080		3	0	136	68.50	92
Cesium (Cs)	1.0000	1.0000 U	1.0U#	2	0	1.0000 U	.100 U	0.5000
Chromium (Cr)	0.0100	0.0100 U	0.05	3	0	0.041	.0100 U	0.0170
Cobalt (Co)	0.0500	0.0500 U	0.05U	3	0	0.0500 U	0.020 U	0.0250
Copper (Cu)	0.0250	0.0250 U	0.2	3	0	0.041	.0250 U	0.0220
Iron (Fe)	0.1000	3.1670	1.0	3	2	17.1 +	.920	6.3633 +
Lead (Pb)	0.0050	0.0050 U	0.05	3	0	0.0050 U	0.004 U	0.0025
Lithium (Li)	0.1000	0.1000 U	2.5	2	0	.0925	.0925	0.0713
Magnesium (Mg)	5.0000	12.4800		3	0	56.7	44.80	52
Manganese (Mn)	0.0150	0.6360	1.0	3	0	0.368	.0515	0.1579
Mercury (Hg)	0.0002	0.0010	0.002	3	0	0.0002 U	0.0002 U	0.0001
Molybdenum(Mo)	0.1000	0.1000 U	0.1	2	0	0.1000 U	.0100 U	0.0500
Nickel (Ni)	0.0400	0.0400 U	0.2	3	0	0.023	0.023	0.0210
Potassium (K)	5.0000	5.0000 U		3	0	3.42	3.42	2.8067
Selenium (Se)	0.0050	0.0050 U	0.01	3	1	.0115 +	.0050 U	0.0055
Silver (Ag)	0.0100	0.0106 *	0.05	3	0	0.0100 U	.0100 U	0.0050
Sodium (Na)	5.0000	47.3620		3	0	110	99.30	105
Strontium (Sr)	0.2000	0.3820	NS	3	0	1.36	1.14	1.2333
Thallium (Tl)	0.0100	0.0500 U	0.05U	3	0	0.0100 U	.0100 U	0.0050
Tin (Sn)	0.2000	0.1000 U	0.1U	2	0	0.2000 U	.100 U	0.1000
Vanadium (V)	0.0500	0.0500 U	0.1	3	0	0.033	0.033	0.0277
Zinc (Zn)	0.0200	0.0276	2.0	3	0	0.126	.0200 U	0.0713

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW064

STATION 103
TOTAL METAL CONSTITUENT CONCENTRATIONS
IN SURFACE WATER
ALL CONCENTRATIONS IN mg/l

Analyte	Detection Limit***	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	Average of** All Values
Aluminum (Al)	0.2000	0.9160 *	0.2U	6	6	169 +	0.766 +	36 +
Antimony (Sb)	0.0600	0.0600 U	0.064U#	6	0	0.0600 U	.0600 U	0.0300
Arsenic (As)	0.0100	0.0100 U	0.05	6	0	.0448	0.002 U	0.0185
Barium (Ba)	0.2000	0.2000 U	1.0	6	1	4.23 +	0.174	1.1015 +
Beryllium (Be)	0.0050	0.0050 U	0.1	6	0	.0214	0.002 U	0.0056
Cadmium (Cd)	0.0050	0.0050 U	0.01	6	1	.0241 +	0.004 U	0.0061
Calcium (Ca)	5.0000	85.0080		6	0	903	99.0	309
Cesium (Cs)	1.0000	1.0000 U	1.0U#	5	1	1.11 +	.0010 U	0.6220
Chromium (Cr)	0.0100	0.0100 U	0.05	6	1	.172 +	.0100 U	0.0410
Cobalt (Co)	0.0500	0.0500 U	0.05U	6	1	.224 +	0.020 U	0.0582 +
Copper (Cu)	0.0250	0.0250 U	0.2	6	1	.213 +	0.020 U	0.0650
Iron (Fe)	0.1000	3.1670	1.0	6	5	142 +	0.691	40 +
Lead (Pb)	0.0050	0.0050 U	0.05	6	3	.656 +	0.005	0.1528 +
Lithium (Li)	0.1000	0.1000 U	2.5	5	0	.116	.0180	0.0568
Magnesium (Mg)	5.0000	12.4800		6	0	56.80	5 U	19
Manganese (Mn)	0.0150	0.6360	1.0	6	3	10.70 +	0.019	2.7192 +
Mercury (Hg)	0.0002	0.0010	0.002	5	0	.0009	0.0002 U	0.0003
Molybdenum(Mo)	0.1000	0.1000 U	0.1	5	1	.114 +	.100 U	0.0628
Nickel (Ni)	0.0400	0.0400 U	0.2	6	1	.273 +	0.020 U	0.0622
Potassium (K)	5.0000	5.0000 U		6	0	32.70	0.928	7.5297
Selenium (Se)	0.0050	0.0050 U	0.01	6	0	0.0050 U	.0020 U	0.0025
Silver (Ag)	0.0100	0.0106 *	0.05	6	0	0.0100 U	.0100 U	0.0050
Sodium (Na)	5.0000	47.3620		6	0	20.60	5 U	13
Strontium (Sr)	0.2000	0.3820	NS	6	0	2.27	0.389	0.5650
Thallium (Tl)	0.0100	0.0500 U	0.05U	6	0	0.0100 U	.0030 U	0.0050
Tin (Sn)	0.2000	0.1000 U	0.1U	5	0	0.2000 U	.100 U	0.1000
Vanadium (V)	0.0500	0.0500 U	0.1	6	2	.445 +	0.010 U	0.1248 +
Zinc (Zn)	0.0200	0.0276	2.0	6	0	.772	0.020 U	0.2563

(+) Value exceeds ARAR; (____) Value exceeds background; # - Value shown is TBC; *Where no Tolerance Interval, highest background value.
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW103

903-PAD AND LIP SITE
INORGANIC CONSTITUENT CONCENTRATIONS
ALL CONCENTRATIONS IN MG/L

Analyte	***CRDL	Background Value*	ARAR/TBC Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Nitrate-Nitrite as N	5.0000	2.69	10	27	1	24 +	0.06	2.900
Chloride	5.0000	106.94	250	27	0	120	16.9	35
Sulfate	5.0000	48.81	250	27	0	120	1.0 U	47
Total Dissolved Solids	5.0000	271.15	400	27	22	790 +	332	479 +
HCO3-	10.0000	296.97	NS	27	0	600	220	357

(+) Value exceeds ARAR; (____) Value exceeds background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW050, SW051, SW052, SW055, SW057, SW058, SW077

STATION 53
INORGANIC CONSTITUENT CONCENTRATIONS
ALL CONCENTRATIONS IN MG/L

Analyte	***CRDL	Background Value*	ARAR/TBC Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Nitrate-Nitrite as N	5.0000	2.69	10	10	0	0.17	0.05 U	2.024
Chloride	5.0000	106.94	250	10	0	170	30.6	68
Sulfate	5.0000	48.81	250	10	0	49	5 U	27
Total Dissolved Solids	5.0000	271.15	400	10	10	666 +	460 +	534 +
HCO3-	10.0000	296.97	NS	10	0	710	370	473

(+) Value exceeds ARAR; (____) Value exceeds background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW053

SOUTH WALNUT CREEK
INORGANIC CONSTITUENT CONCENTRATIONS
ALL CONCENTRATIONS IN MG/L

Analyte	***CRDL	Background Value*	ARAR/TBC Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Nitrate-Nitrite as N	5.0000	2.69	10	43	0	5.6	0.05 U	3.246
Chloride	5.0000	106.94	250	43	0	81	3 U	35
Sulfate	5.0000	48.81	250	43	0	74	16	43
Total Dissolved Solids	5.0000	271.15	400	43	22	3300 +	26	411 +
HCO3-	10.0000	296.97	NS	43	0	540	6	260

(+) Value exceeds ARAR; (____) Value exceeds background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW056, SW060, SW061, SW101

Surface Water

Total Metals Sampling Results

STATION 103

Station Number	Date Sampled	Cobalt (Co), total mg/l	Copper (Cu), total mg/l	Iron (Fe), total mg/l	Lead (Pb), total mg/l	Lithium (Li), total mg/l	Magnesium (Mg), total mg/l	Manganese (Mn), total mg/l	Mercury (Hg), total mg/l	Molybdenum (Mo), total mg/l
SW-103	07/11/88	0.020 U	0.020 U	0.691	0.005	NR	11.0	0.019	0.0002 U	NR
SW-103	03/23/89	.224 A	.213 R	142 R	.656 A	.116 A	56.80 V	10.70 A	NR	.114 A
SW-103	05/25/89	Data not yet received								
SW-103	06/15/89	.0500 U V	.0655 V	40.70 V	.116 A	.100 U A	5U V	3.18 A	.0009 A	.100 U A
SW-103	07/13/89	.0500 U V	.0386 V	19.70 V	.0249 A	.100 U A	15.70 V	.641 V	.0002 U R	.100 U A
SW-103	08/02/89	.0500 U V	.0476 A	32.10 R	.108 A	.100 U V	18.50 V	1.59 V	.0002 U V	.100 U V
SW-103	09/07/89	Data not yet received								
SW-103	10/03/89	.0200 U V	.0200 U V	2.88 V	.0071 V	.0180 A	11.90 V	.185 V	.0002 U A	.500 U V
SW-103	11/03/89	Data not yet received								
SW-103	12/06/89	Data not yet received								
SW-103	01/18/90	Data not yet received								
SW-103	02/12/90	Data not yet received								
SW-103	03/22/90	Data not yet received								

VALUE QUALIFIERS: NR = Analyte not reported U = Analyzed but not detected * = Holding time not met E = Estimated value
J = Present below detection limit B = Present in laboratory blank N = Batch spike not in 80-120% range
DATA VALIDATION QUALFIERS: (No validation qualifier indicates data has not been validated.) R = Rejected; A = Acceptable with qualifications; V = Valid

STATION 59
INORGANIC CONSTITUENT CONCENTRATIONS
ALL CONCENTRATIONS IN MG/L

Analyte	***CRDL	Background Value*	ARAR/TBC Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Nitrate-Nitrite as N	5.0000	2.69	10	11	0	5	2.7	4.009
Chloride	5.0000	106.94	250	11	0	53	27	45
Sulfate	5.0000	48.81	250	11	0	60	24.5	49
Total Dissolved Solids	5.0000	271.15	400	11	10	580 +	210	477 +
HCO3-	10.0000	296.97	NS	11	0	500	324	400

(+) Value exceeds ARAR; (____) Value exceeds background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW059

STATION 63
INORGANIC CONSTITUENT CONCENTRATIONS
ALL CONCENTRATIONS IN MG/L

Analyte	***CRDL	Background Value*	ARAR/TBC Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Nitrate-Nitrite as N	5.0000	2.69	10	2	0	5.0000 U	0.1 U	2.500
Chloride	5.0000	106.94	250	2	0	51	50.5	51
Sulfate	5.0000	48.81	250	2	0	228	197	213
Total Dissolved Solids	5.0000	271.15	400	2	2	675 +	651 +	663 +
HCO3-	10.0000	296.97	NS	2	0	384	361	373

(+) Value exceeds ARAR; (____) Value exceeds background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW063

STATION 64
INORGANIC CONSTITUENT CONCENTRATIONS
ALL CONCENTRATIONS IN MG/L

Analyte	***CRDL	Background Value*	ARAR/TBC Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Nitrate-Nitrite as N	5.0000	2.69	10	4	0	0.2	0.05 U	1.343
Chloride	5.0000	106.94	250	4	0	64	0.5 U	42
Sulfate	5.0000	48.81	250	4	0	130	4.0 U	82
Total Dissolved Solids	5.0000	271.15	400	4	4	720 +	660 +	694 +
HCO3-	10.0000	296.97	NS	4	0	580	404	484

(+) Value exceeds ARAR; (____) Value exceeds background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW064

STATION 103
INORGANIC CONSTITUENT CONCENTRATIONS
ALL CONCENTRATIONS IN MG/L

Analyte	***CRDL	Background Value*	ARAR/TBC Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Nitrate-Nitrite as N	5.0000	2.69	10	10	0	7.3	3.9	5.450
Chloride	5.0000	106.94	250	10	0	48	31	40
Sulfate	5.0000	48.81	250	10	0	68	51	58
Total Dissolved Solids	5.0000	271.15	400	10	8	490 +	210	406 +
HCO3-	10.0000	296.97	NS	10	0	710	251	361

(+) Value exceeds ARAR; (____) Value exceeds background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates non-detected, the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL)*.
NS-No Standard. U-Detection Limit. J-Present below Detection Limit. B-Present in Blank.
Minimum, Maximum, and Average based on all available data.
Wells/Stations in this group: SW103

903-PAD AND LIP SITE
DISSOLVED RADIOCHEMISTRY CONCENTRATIONS
FOR SURFACE WATER
ALL CONCENTRATIONS IN pCi/l

Analyte	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Gross Alpha	4.3760	7.0	5	0	5.67	< 2.00	2.8
Gross Beta	8.7980	5.0	5	0	.28	< 4.00	2.0
Strontium 89, 90	1.3980	8.0	0	0		< 1.00	*******
Plutonium 239, 240	0.0000	.05	5	3	1.06 +	< 0.01	0.40 +
Americium 241	0.0130	.05	0	0		< 0.01	*******
Tritium	0.0000	500	0	0			*******
Total Uranium	1.8000*	5.0	5	1	5.020 +	2.860	4.0

(+) Value exceeds ARAR; (_____) Value exceeds Background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates a less than (<) value, or the counting error for a datum is greater than the datum, the value used in the computation is one half the Minimum Detectable Activity (MDA).
NS-No Standard *When no Background Tolerance Interval value used is the Minimum Detectable Activity (MDA)
Minimum, Maximum, and Average based on all availabe data.
Wells/Stations in this group: SW050, SW051, SW052, SW055, SW057, SW058, SW077

STATION 53
DISSOLVED RADIOCHEMISTRY CONCENTRATIONS
FOR SURFACE WATER
ALL CONCENTRATIONS IN pCi/l

Analyte	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Gross Alpha	4.3760	7.0	2	1	8.48 +	< 2.00	4.7
Gross Beta	8.7980	5.0	2	1	7 +	< 4.00	4.5
Strontium 89, 90	1.3980	8.0	1	0	.0	< 1.00	0.50
Plutonium 239, 240	0.0000	.05	2	2	1.89 +	0.20 +	1.0 +
Americium 241	0.0130	.05	1	0	0.03	0.03	0.030
Tritium	0.0000	500	0	0			*******
Total Uranium	1.8000*	5.0	2	1	7.260 +	2.000	4.6

(+) Value exceeds ARAR; (_____) Value exceeds Background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates a less than (<) value, or the counting error for a datum is greater than the datum, the value used in the computation is one half the Minimum Detectable Activity (MDA).
NS-No Standard *When no Background Tolerance Interval value used is the Minimum Detectable Activity (MDA)
Minimum, Maximum, and Average based on all availabe data.
Wells/Stations in this group: SW053

SOUTH WALNUT CREEK
DISSOLVED RADIOCHEMISTRY CONCENTRATIONS
FOR SURFACE WATER
ALL CONCENTRATIONS IN pCi/l

Analyte	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Gross Alpha	4.3760	7.0	8	1	20.6 +	< 2.00	3.8
Gross Beta	8.7980	5.0	8	5	43.7 +	< 4.00	10.0 +
Strontium 89, 90	1.3980	8.0	4	0	.3	< 1.00	0.50
Plutonium 239, 240	0.0000	.05	8	0	.108 +	< 0.01	0.0081
Americium 241	0.0130	.05	4	0	0.02	< 0.01	0.0050
Tritium	0.0000	500	0	0			*******
Total Uranium	1.8000*	5.0	8	5	10.260 +	< 1.80	4.9

(+) Value exceeds ARAR; (_____) Value exceeds Background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates a less than (<) value, or the counting error for a datum is greater than the datum, the value used in the computation is one half the Minimum Detectable Activity (MDA).
NS-No Standard *When no Background Tolerance Interval value used is the Minimum Detectable Activity (MDA)
Minimum, Maximum, and Average based on all availabe data.
Wells/Stations in this group: SW056, SW060, SW061, SW101

STATION 59
DISSOLVED RADIOCHEMISTRY CONCENTRATIONS
FOR SURFACE WATER
ALL CONCENTRATIONS IN pCi/l

Analyte	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Gross Alpha	4.3760	7.0	2	1	16 +	5.03	11 +
Gross Beta	8.7980	5.0	2	1	8.24 +	< 4.00	5.1 +
Strontium 89, 90	1.3980	8.0	1	0	0.2	< 1.00	0.50
Plutonium 239, 240	0.0000	.05	2	0	.0117	< 0.01	0.0075
Americium 241	0.0130	.05	1	0	0.01	< 0.01	0.0050
Tritium	0.0000	500	0	0			*******
Total Uranium	1.8000*	5.0	2	2	7.500 +	5.660 +	6.6 +

(+) Value exceeds ARAR; (_____) Value exceeds Background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates a less than (<) value, or the counting error for a datum is greater than the datum, the value used in the computation is one half the Minimum Detectable Activity (MDA).
NS-No Standard *When no Background Tolerance Interval value used is the Minimum Detectable Activity (MDA)
Minimum, Maximum, and Average based on all availabe data.
Wells/Stations in this group: SW059

STATION 63
DISSOLVED RADIOCHEMISTRY CONCENTRATIONS
FOR SURFACE WATER
ALL CONCENTRATIONS IN pCi/l

Analyte	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Gross Alpha	4.3760	7.0	1	1	8.25 +	8.25 +	8.3 +
Gross Beta	8.7980	5.0	1	1	18.9 +	18.9 +	19 +
Strontium 89, 90	1.3980	8.0	0	0		< 1.00	*******
Plutonium 239, 240	0.0000	.05	1	0	.0750 +	< 0.01	0.0050
Americium 241	0.0130	.05	0	0		< 0.01	*******
Tritium	0.0000	500	0	0			*******
Total Uranium	1.8000*	5.0	1	1	17.790 +	17.790 +	18 +

(+) Value exceeds ARAR; (_____) Value exceeds Background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates a less than (<) value, or the counting error for a datum is greater than the datum, the value used in the computation is one half the Minimum Detectable Activity (MDA).
NS-No Standard *When no Background Tolerance Interval value used is the Minimum Detectable Activity (MDA)
Minimum, Maximum, and Average based on all availabe data.
Wells/Stations in this group: SW063

STATION 63
DISSOLVED RADIOCHEMISTRY CONCENTRATIONS
FOR SURFACE WATER
ALL CONCENTRATIONS IN pCi/l

Analyte	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Gross Alpha	4.3760	7.0	1	1	8.25 +	8.25 +	8.3 +
Gross Beta	8.7980	5.0	1	1	18.9 +	18.9 +	19 +
Strontium 89, 90	1.3980	8.0	0	0		< 1.00	*******
Plutonium 239, 240	0.0000	.05	1	0	.0750 +	< 0.01	0.0050
Americium 241	0.0130	.05	0	0		< 0.01	*******
Tritium	0.0000	500	0	0			*******
Total Uranium	1.8000*	5.0	1	1	17.790 +	17.790 +	18 +

(+) Value exceeds ARAR; (_____) Value exceeds Background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates a less than (<) value, or the counting error for a datum is greater than the datum, the value used in the computation is one half the Minimum Detectable Activity (MDA).
NS-No Standard *When no Background Tolerance Interval value used is the Minimum Detectable Activity (MDA)
Minimum, Maximum, and Average based on all availabe data.
Wells/Stations in this group: SW063

STATION 64
DISSOLVED RADIOCHEMISTRY CONCENTRATIONS
FOR SURFACE WATER
ALL CONCENTRATIONS IN pCi/l

Analyte	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Gross Alpha	4.3760	7.0	1	0	6.34	6.34	6.3
Gross Beta	8.7980	5.0	1	1	7.20 +	7.20 +	7.2 +
Strontium 89, 90	1.3980	8.0	0	0		< 1.00	*******
Plutonium 239, 240	0.0000	.05	1	0	.00	< 0.01	0.0050
Americium 241	0.0130	.05	0	0		< 0.01	*******
Tritium	0.0000	500	0	0			*******
Total Uranium	1.8000*	5.0	1	1	15.530 +	15.530 +	16 +

(+) Value exceeds ARAR; (_____) Value exceeds Background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates a less than (<) value, or the counting error for a datum is greater than the datum, the value used in the computation is one half the Minimum Detectable Activity (MDA).
NS-No Standard *When no Background Tolerance Interval value used is the Minimum Detectable Activity (MDA)
Minimum, Maximum, and Average based on all availabe data.
Wells/Stations in this group: SW064

STATION 103
DISSOLVED RADIOCHEMISTRY CONCENTRATIONS
FOR SURFACE WATER
ALL CONCENTRATIONS IN pCi/l

Analyte	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Gross Alpha	4.3760	7.0	2	0	.03	< 2.00	1.0
Gross Beta	8.7980	5.0	2	1	21.7 +	< 4.00	12 +
Strontium 89, 90	1.3980	8.0	1	0	0.2	< 1.00	0.50
Plutonium 239, 240	0.0000	.05	2	0	.01	< 0.01	0.0050
Americium 241	0.0130	.05	1	0	.00	< 0.01	0.0050
Tritium	0.0000	500	0	0			*******
Total Uranium	1.8000*	5.0	2	0	4.440	3.300	3.9

(+) Value exceeds ARAR; (_____) Value exceeds Background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates a less than (<) value, or the counting error for a datum is greater than the datum, the value used in the computation is one half the Minimum Detectable Activity (MDA).
NS-No Standard *When no Background Tolerance Interval value used is the Minimum Detectable Activity (MDA)
Minimum, Maximum, and Average based on all availabe data.
Wells/Stations in this group: SW103

903-PAD AND LIP SITE
TOTAL RADIOCHEMISTRY CONCENTRATIONS
FOR SURFACE WATER
ALL CONCENTRATIONS IN pCi/l

Analyte	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Gross Alpha	7.7450	7.0	13	11	350 +	< 2.00	85 +
Gross Beta	9.8880	5.0	13	11	65 +	< 4.00	29 +
Strontium 89, 90	2.0400	8.0	13	0	2.5	< 1.00	0.69
Plutonium 239, 240	0.0180	.05	18	17	60 +	< 0.01	15 +
Americium 241	0.0420	.05	13	7	33 +	< 0.01	2.0 +
Tritium	257.18	500	18	1	829 +	<400.00	230
Total Uranium	1.8000*	5.0	18	4	18.100 +	1.770	4.5

(+) Value exceeds ARAR; (_____) Value exceeds Background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates a less than (<) value, or the counting error for a datum is greater than the datum, the value used in the computation is one half the Minimum Detectable Activity (MDA).
NS-No Standard *When no Background Tolerance Interval value used is the Minimum Detectable Activity (MDA)
Minimum, Maximum, and Average based on all availabe data.
Wells/Stations in this group: SW050, SW051, SW052, SW055, SW057, SW058, SW077

STATION 53
TOTAL RADIOCHEMISTRY CONCENTRATIONS
FOR SURFACE WATER
ALL CONCENTRATIONS IN pCi/l

Analyte	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Gross Alpha	7.7450	7.0	4	3	230 +	3.2	125 +
Gross Beta	9.8880	5.0	4	3	14 +	< 4.00	7.8 +
Strontium 89, 90	2.0400	8.0	4	0	29 +	< 1.00	1.3
Plutonium 239, 240	0.0180	.05	5	5	56 +	1.101 +	20 +
Americium 241	0.0420	.05	4	3	28 +	< 0.01	9.5 +
Tritium	257.18	500	5	0	310	<400.00	222
Total Uranium	1.8000*	5.0	5	2	8.470 +	1.500	5.2 +

(+) Value exceeds ARAR; (_____) Value exceeds Background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates a less than (<) value, or the counting error for a datum is greater than the datum, the value used in the computation is one half the Minimum Detectable Activity (MDA).
NS-No Standard *When no Background Tolerance Interval value used is the Minimum Detectable Activity (MDA)
Minimum, Maximum, and Average based on all availabe data.
Wells/Stations in this group: SW053

SOUTH WALNUT CREEK
TOTAL RADIOCHEMISTRY CONCENTRATIONS
FOR SURFACE WATER
ALL CONCENTRATIONS IN pCi/l

Analyte	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Gross Alpha	7.7450	7.0	23	12	780 +	< 2.00	73 +
Gross Beta	9.8880	5.0	23	22	570 +	< 4.00	56 +
Strontium 89, 90	2.0400	8.0	23	0	24 +	< 1.00	0.72
Plutonium 239, 240	0.0180	.05	27	8	3.3 +	< 0.01	0.32 +
Americium 241	0.0420	.05	21	6	0.44 +	< 0.01	0.083 +
Tritium	257.18	500	27	0	500	<400.00	225
Total Uranium	1.8000*	5.0	27	14	11.100 +	1.990	5.5 +

(+) Value exceeds ARAR; (_____) Value exceeds Background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates a less than (<) value, or the counting error for a datum is greater than the datum, the value used in the computation is one half the Minimum Detectable Activity (MDA).
NS-No Standard *When no Background Tolerance Interval value used is the Minimum Detectable Activity (MDA)
Minimum, Maximum, and Average based on all availabe data.
Wells/Stations in this group: SW056, SW060, SW061, SW101

STATION 59
TOTAL RADIOCHEMISTRY CONCENTRATIONS
FOR SURFACE WATER
ALL CONCENTRATIONS IN pCi/l

Analyte	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Gross Alpha	7.7450	7.0	5	3	310 +	< 2.00	96 +
Gross Beta	9.8880	5.0	5	4	340 +	4	96 +
Strontium 89, 90	2.0400	8.0	5	0	1.0	< 1.00	0.60
Plutonium 239, 240	0.0180	.05	6	3	3.1 +	< 0.01	0.75 +
Americium 241	0.0420	.05	5	2	1.3 +	< 0.01	0.30 +
Tritium	257.18	500	6	0	200	<400.00	200
Total Uranium	1.8000*	5.0	6	5	16.600 +	0.200	7.9 +

(+) Value exceeds ARAR; (_____) Value exceeds Background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates a less than (<) value, or the counting error for a datum is greater than the datum, the value used in the computation is one half the Minimum Detectable Activity (MDA).
NS-No Standard *When no Background Tolerance Interval value used is the Minimum Detectable Activity (MDA)
Minimum, Maximum, and Average based on all availabe data.
Wells/Stations in this group: SW059

STATION 63
TOTAL RADIOCHEMISTRY CONCENTRATIONS
FOR SURFACE WATER
ALL CONCENTRATIONS IN pCi/l

Analyte	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Gross Alpha	7.7450	7.0	0	0			*******
Gross Beta	9.8880	5.0	0	0			*******
Strontium 89, 90	2.0400	8.0	0	0			*******
Plutonium 239, 240	0.0180	.05	1	1	0.242 +	0.242 +	0.24 +
Americium 241	0.0420	.05	0	0			*******
Tritium	257.18	500	1	1	1100 +	1100 +	1100 +
Total Uranium	1.8000*	5.0	1	1	20.500 +	20.500 +	21 +

(+) Value exceeds ARAR; (_____) Value exceeds Background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates a less than (<) value, or the counting error for a datum is greater than the datum, the value used in the computation is one half the Minimum Detectable Activity (MDA).
NS-No Standard *When no Background Tolerance Interval value used is the Minimum Detectable Activity (MDA)
Minimum, Maximum, and Average based on all availabe data.
Wells/Stations in this group: SW063

STATION 64
TOTAL RADIOCHEMISTRY CONCENTRATIONS
FOR SURFACE WATER
ALL CONCENTRATIONS IN pCi/l

Analyte	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Gross Alpha	7.7450	7.0	2	2	34 +	17 +	26 +
Gross Beta	9.8880	5.0	2	2	93 +	17 +	55 +
Strontium 89, 90	2.0400	8.0	2	0	1.5	< 1.00	1.0
Plutonium 239, 240	0.0180	.05	3	0	.123 +	< 0.01	0.0050
Americium 241	0.0420	.05	2	0	.01	< 0.01	0.0050
Tritium	257.18	500	3	0	110	<400.00	200
Total Uranium	1.8000*	5.0	3	2	23.590 +	3.600	13 +

(+) Value exceeds ARAR; (_____) Value exceeds Background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates a less than (<) value, or the counting error for a datum is greater than the datum, the value used in the computation is one half the Minimum Detectable Activity (MDA).
NS-No Standard *When no Background Tolerance Interval value used is the Minimum Detectable Activity (MDA)
Minimum, Maximum, and Average based on all availabe data.
Wells/Stations in this group: SW064

STATION 103
TOTAL RADIOCHEMISTRY CONCENTRATIONS
FOR SURFACE WATER
ALL CONCENTRATIONS IN pCi/l

Analyte	Background Value*	ARAR Value	Number of Results	Number of Results Above ARAR	Maximum Value	Minimum Value	**Average of All Values
Gross Alpha	7.7450	7.0	4	3	53 +	< 2.00	26 +
Gross Beta	9.8880	5.0	4	3	55 +	< 4.00	28 +
Strontium 89, 90	2.0400	8.0	4	0	37 +	< 1.00	0.50
Plutonium 239, 240	0.0180	.05	5	4	1.4 +	0.01	0.48 +
Americium 241	0.0420	.05	4	3	.330 +	< 0.01	0.14 +
Tritium	257.18	500	5	0	458	<400.00	244
Total Uranium	1.8000*	5.0	5	2	7.330 +	0.100	3.9

(+) Value exceeds ARAR; (_____) Value exceeds Background
The average is computed by first determining the arithmetic mean concentration at individual wells/stations and then using this data to compute the arithmetic mean for the wells/stations in this group. If a datum indicates a less than (<) value, or the counting error for a datum is greater than the datum, the value used in the computation is one half the Minimum Detectable Activity (MDA).
NS-No Standard *When no Background Tolerance Interval value used is the Minimum Detectable Activity (MDA)
Minimum, Maximum, and Average based on all availabe data.
Wells/Stations in this group: SW103

APPENDIX D

MILESTONE SCHEDULE

SURFACE WATER IM/IRAP/EA

SOUTH WALNUT CREEK BASIN

OPERABLE UNIT NO. 2

TABLE D-1

MILESTONE SCHEDULE

SURFACE WATER IM/IRAP/EA
SOUTH WALNUT CREEK BASIN
OPERABLE UNIT NO. 2

SOUTH WALNUT CREEK BASIN INTERIM MEASURE/INTERIM REMEDIAL ACTION PLAN/ ENVIRONMENTAL ASSESSMENT (IM/IRAP/EA) AND DECISION DOCUMENT

Submit Draft Proposed IM/IRA Decision Document	June 19, 1990
Submit Proposed IM/IRA Decision Document to EPA/CDH	September 18, 1990
Public Review of Proposed IM/IRA Decision Document	September 26, 1990
Submit Draft Responsiveness Summary and Final IM/IRA Decision Document	January 11, 1991
Field Treatability Test System Installation Complete	April 12, 1991
Begin Field Treatability Testing	April 15, 1991
Complete IM/IRA Construction	September 30, 1991
Begin Field Treatability Testing (Entire System)	October 30, 1991
Submit Draft Treatability Test Report	April 1, 1992
Submit Final Treatability Test Program Report	June 2, 1992

APPENDIX E

ARAR TABLES FOR

SURFACE WATER CONTAMINANTS

TABLE E-1.1
CHEMICAL SPECIFIC ARARs
FOR VOLATILE ORGANIC COMPOUNDS
IN SURFACE WATER AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

Chemical Risk*	Maximum Concentration in Surface Water[a] (ug/l)	ARAR (ug/l)	TBC (ug/l)	ARAR Reference	Comment	Hazard Quotient/ Cancer
Organic Compounds						
Vinyl Chloride	15	2		WQCC Surface Water; Drinking Water Standard		No oral RfD/ 1.3E-04
Methylene Chloride	44		5U	No Standard	RCRA Subpart F background is TBC	2.4E-03/1.1E-06
Acetone	130		10U	No Standard	Acetone is RCRA (40 CFR Part 264, Subpart F) Appendix IX constituent. Background is TBC.	2.8E-03/not considered an oral carcinogen.
Carbon Tetrachloride	605	5		WQCC Surface Water; Drinking Water Standard		2.0E-01/1.9E-05
1,1 Dichloroethane	6		5U	No Standard	RCRA Subpart F background is TBC	1.4E-03/1.3E-05
1,2 Dichloroethene	56		5U	No Standard	RCRA Subpart F background is TBC	7.1E-03 (based on transisomer)/ not considered an oral carcinogen
1,1 Dichloroethene	143	7		WQCC Surface Water; Drinking Water Standard		2.24E-02/1.2E-04
Tetrachloroethene	280	1.0U		WQCC Surface Water; Fish and Water Ingestion Standard	Standard (0.8) is below detection limit, therefore, detection limit is ARAR.	2.8E-03/1.5E-06
Trichloroethene	260	5		WQCC Surface Water; Drinking Water Standard		No oral RfD/ 1.6E-06

TABLE E-1.2
CHEMICAL SPECIFIC ARARs
FOR METALS DETECTED ABOVE BACKGROUND
IN SURFACE WATER AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

Chemical	Maximum Concentration in Surface Water[a] (mg/l)	ARAR (mg/l)	TBC (mg/l)	ARAR Reference	Comment	Hazard Quotient/ Cancer Risk*
Metals						
Aluminum	25.4	0.2U		WQCC Surface Water Aquatic Life Standard; Default to detection limit.	Standard (0.150)is below detection limit, therefore, detection limit is ARAR.	No oral RfD/not considered an oral carcinogen
Antimony	0.102		0.064	No Standard	RCRA Subpart F background is TBC.	1.71E-03/not considered an oral carcinogen
Arsenic	0.01U	0.05(0.025U)		WQCC Surface Water; Drinking Water Standard.	The detection limit is selected as a remediation goal because of the relative high hazard quotient and cancer risk associated with the standard (0.05).	0.7/1.25E-03
Barium	2.02	1.0		WQCC Surface Water; Drinking Water Standard.	5.7E-01/not considered an oral carcinogen	
Beryllium	0.0572	0.1		WQCC Surface Water; Agricultural Standard.	0.56/1.2E-02	
Cadmium	0.0142	<0.005		WQCC Surface Water Aquatic Life Standard.	Standard (<0.005) is detection limit, therefore, detection limit is ARAR.	2.8E-01/not considered an oral carcinogen
Calcium	152			No Standard		No oral RfD/not considered an oral carcinogen
Chromium III	0.212	0.01		WQCC Surface Water; Aquatic Life Standard.	Analytical result is total chromium.	2.8E-04/not considered an oral carcinogen
Chromium V	0.212	0.01		WQCC Surface Water; Aquatic Life Standard.	Analytical result is total chromium.	5.8E-02/not considered an oral carcinogen.

TABLE E-1.2 (cont.)
CHEMICAL SPECIFIC ARARs
FOR METALS DETECTED ABOVE BACKGROUND
IN SURFACE WATER AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

Chemical	Maximum Concentration in Surface Water[a] (mg/l)	ARAR (mg/l)	TBC (mg/l)	ARAR Reference	Comment	Hazard Quotient/ Cancer Risk*
Metals (cont.)						
Cobalt	0.132		0.05	WQCC Ground Water Agricultural Standard is TBC.		No oral Rfd/not considered an oral carcinogen
Copper	0.293	0.025U		WQCC Surface Water; Aquatic Life Standard. therefore, detection limit is ARAR	Standard (<0.025) is less than detection limit is ARAR	1.9E-02/not considered an oral carcinogen
Iron	204 (3.69)	1.0 (0.3)		WQCC Surface Water Standard	Analytical results are total iron; dissolved iron in parentheses	No oral RfD/not considered an oral carcinogen
Lead	0.215	0.005U		WQCC Surface Water; Aquatic Life Standard	Standard (<0.005) is less than detection limit, therefore, detection limit is ARAR	No oral RfD/not considered an oral carcinogen
Lithium	2.56		2.5	WQCC Ground Water Agricultural Standard is TBC.		No oral RfD/not considered an oral carcinogen
Magnesium	36.70			No Standard		No oral RfD/not considered an oral carcinogen
Manganese	3.68 (0.643)	1.0 (0.05)		WQCC Surface Water Standard	Analytical results are total manganese; dissolved manganese in parentheses	1.4E-01 (7.1E-03)/not considered an oral carcinogen
Mercury	0.0024	0.0002U		WQCC Surface Water; Aquatic Life Standard. therefore, detection limit is ARAR	Standard (0.00001)is less than detection limit is ARAR	1.9E-02/not considered an oral carcinogen

TABLE E-1.2 (cont.)
CHEMICAL SPECIFIC ARARs
FOR METALS DETECTED ABOVE BACKGROUND
IN SURFACE WATER AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

Chemical	Maximum Concentration in Surface Water[b] (mg/l)	ARAR (mg/l)	TBC (mg/l)	ARAR Reference	Comment	Hazard Quotient/ Cancer Risk*
Metals (cont.)						
Molybdenum	0.174			No Standard		No oral RfD/not considered an oral carcinogen
Nickel	0.246	0.04U		WQCC Surface Water; Aquatic Life Standard	Standard (<0.04) is below detection limit, therefore, detection limit is ARAR	5.8E-02/not considered an oral carcinogen
Potassium	21.5			No Standard		No oral RfD/not considered an oral carcinogen
Selenium	0.016	0.01		WQCC Surface Water; Drinking Water Standard.		9.5E-02/not considered an oral carcinogen
Sodium	58.20			No Standard		No oral RfD/not considered an oral carcinogen
Strontium	1.36			No Standard		No oral RfD/not considered an oral carcinogen
Vanadium	0.555		0.1	WQCC Groundwater; Agriculture Standard is TBC.		4.08E-01/not considered an oral carcinogen
Zinc	2.66	0.05		WQCC Surface Water; Aquatic Life Standard		7.0E-03/not considered an oral carcinogen

TABLE E-1.3
CHEMICAL SPECIFIC ARARs
FOR OTHER INORGANIC CONSTITUENTS DETECTED ABOVE BACKGROUND
IN SURFACE WATER AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

Chemical	Maximum Concentration in Surface Water[a] (mg/l)	ARAR (mg/l)	TBC (mg/l)	ARAR Reference	Comment	Hazard Quotient/ Cancer Risk
Conventional Pollutants						
Nitrite	5.6	1.0		WQCC Surface Water Standard	Analytical results are total nitrate plus nitrate nitrogen. Reanalysis required to determine if nitrite ARAR is exceeded.	2.9E-01/not considered an oral carcinogen
Nitrate	5.6	10.0		WQCC Surface Water Standard	Analytical results are total nitrate plus nitrite nitrogen.	No oral RfD/not considered an oral carcinogen
Chloride	170	250		WQCC Surface Water Standard		No oral RfD/not considered an oral carcinogen
Sulfate	74	250		WQCC Surface Water Standard		No oral RfD/not considered an oral carcinogen
Bicarbonate as $CaCO_3$	540			No Standard		No oral RfD/not considered an oral carcinogen
T.D.S.	3300		400	WQCC Ground Water Standard is TBC		No oral RfD/not considered an oral carcinogen

TABLE E-1.4
CHEMICAL SPECIFIC ARARs
FOR RADIONUCLIDES DETECTED ABOVE BACKGROUND
IN SURFACE WATER AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

Chemical	Maximum Concentration in Surface Water[a] (pCi/l)	ARAR (pCi/l)	TBC (pCi/l)	ARAR Reference	Comment	Hazard Quotient/ Cancer Risk**
Radionuclides						
Gross Alpha	780	11		WQCC Surface Water Standard		No oral RfD/NA
Gross Beta	570	19		WQCC Surface Water Standard		No oral RfD/NA
$Pu^{238,239,240}$	3.3	0.05		WQCC Surface Water Standard		No oral RfD/7.0 x 10^{-7}, 8.0 x 10^{-8}, 8.0 x 10^{-8}
Am^{241}	1.3	0.05		WQCC Surface Water Standard		No oral RfD/8.0 x 10^{-7}
H^{3}	0.00	500		WQCC Surface Water Standard		No oral RfD/1.4 x 10^{-6}
$Sr^{89,90}$	0.3	8		WQCC Surface Water Standard		No oral RfD/1.2 x 10^{-6}, 1.4 x 10^{-5}
$Uranium^{total}$	16.6	10		WQCC Surface Water Standard		No oral RfD/3.3 x 10^{-5}

(a) - Maximum compound concentrations determined from all available data (see Appendix A).
U - Detection limit
J - Estimated below detection limit
B - Compound also present in blank
TBC - To be considered

* - Hazard quotient is ratio of daily intake at level of ARAR based on the consumption of 2 liters/day and a body weight of 70 kg to the chronic oral RfD (EPA, 1990 - Health Effects Assessment Summary Tables, First/Second Quarters). RfD = Agency-wide reference dose, developed by an inter-office work group chaired by the Office of Research and Development, U.S. EPA, Washington, D.C. Cancer Risk = ARAR (ug/l) x Carcinogenic Potency Factor $(ug/l)^{-1}$

** - For radionuclides cancer risk = ARAR (pCi/l) x Pathway-specific unit risk $(pCi/l)^{-1}$. The cancer risk is not applicable to gross alpha and beta. Cancer risk depends not only on the form of radiation, but also on the radionuclide emitting the radiation because radionuclides selectively affect various organs.

TABLE E-2.1
ANALYSIS OF CHEMICAL SPECIFIC ARARs FOR VOLATILE
ORGANIC COMPOUNDS IN SURFACE WATER AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

Chemical	RCRA Subpart F Concentration Limit[a] (ug/ℓ)	WQCC Ground Water Quality Standards[b] (ug/ℓ)	SDWA Maximum Contaminant Level (MCL)[c] (ug/ℓ)	For Use In Special Circumstances SDWA/MCLG[d] (ug/ℓ)	CWA Ambient Water Quality Criteria for Protection of Aquatic Life[k] Freshwater Acute/Chronic (ug/ℓ)	WQCC Surface Water Quality Standards[e] (ug/ℓ)	ARAR (ug/ℓ)	Comment
Organic Compounds								
Carbon Tetrachloride	5U	5	5	0	35,000/	5	5	WQCC Surface Water Quality Standard is applicable. RCRA Subpart F is TBC.
1,2 Dichloroethene	5U	-	-	-	11,000[f]/	-		No Standard. RCRA Subpart F is TBC.
1,1 Dichloroethane	5U	-	-	-	-	-		No Standard. RCRA Subpart F is TBC.
1,1 Dichloroethene	5U	7	7	7	11,000[f]/	7	7	WQCC Surface Water Quality Standard is applicable. RCRA Subpart F is TBC.
Tetrachloroethene	5U	-	-	0	5,200/840[f]	0.8	1.0U	WQCC Surface Water; Fish and Water Ingestion Standard (0.8 ug/ℓ) is BDL, so detection limit is applicable
Acetone	10U[h]	-	-	-	-	-		No Standard. RCRA Subpart F is TBC.
Methylene Chloride	5U	-	-	-	-	-		No Standard. RCRA Subpart F is TBC.

TABLE E-2.1 (cont.)
ANALYSIS OF CHEMICAL SPECIFIC ARARs FOR VOLATILE
ORGANIC COMPOUNDS IN SURFACE WATER AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

Chemical	RCRA Subpart F Concentration Limit[a] (ug/ℓ)	WQCC Ground Water Quality Standards[b] (ug/ℓ)	SDWA Maximum Contaminant Level (MCL)[c] (ug/ℓ)	For Use In Special Circumstances SDWA/MCLG[d] (ug/ℓ)	CWA Ambient Water Quality Criteria for Protection of Aquatic Life[k] Freshwater Acute/Chronic (ug/ℓ)	WQCC Surface Water Quality Standards[e] (ug/ℓ)	ARAR (ug/ℓ)	Comment
Organic Compounds (cont.)								
Trichloroethene	5U	5	5	0	45,000/21,000[f]	5	5	WQCC Surface Water Quality Standard is applicable
Vinyl Chloride	1U	2	2	0	-	2	2	WQCC Surface Water Quality Standard is applicable.

(a) - 40 CFR Part 264.92 Subpart F releases from individual hazardous substance sites. (40 CFR 261, Appendix VIII, List of Hazardous Constituents)
(b) - 5 CCR 1002-8, Section 3.11.5, Basic Standards for Ground Water September 20, 1990.
(c) - 40 CFR Part 141.61 National Primary Drinking Water Standards.
(d) - 40 CFR Part 141.50 National Primary Drinking Water Standards.
(e) - 5 CCR 1002-8, Section 3.8.29, Final Rule Effective March 30, 1990.
(f) - Lowest observed effect level.
(g) - 40 CFR Part 268.41 Subpart D - Treatment Standards.
(h) - RCRA 40 CFR 264, Appendix IX Ground Water Monitoring List Substance Not Included in 40 CFR 261, Appendix VIII, List of Hazardous Constituents
(k) - Clean Water Act, Section 304

ARAR - Applicable or relevant and appropriate requirements
BDL - Below detection limits
LDR - Land disposal restrictions
MCL - Maximum contaminant level
MCLG - Maximum contaminant level goal
RCRA - Resource Conservation and Recovery Act
SDWA - Safe Drinking Water Act
TBC - To be considered
U - Detection Limit
WQCC - Colorado Water Quality Control Commission

TABLE E-2.2
ANALYSIS OF CHEMICAL SPECIFIC ARARs FOR METALS
DETECTED ABOVE BACKGROUND IN SURFACE WATER AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

Chemical	RCRA Subpart F Concentration Limit[a] (mg/l)	WQCC Ground Water Standard Human Health/ Agriculture[b] (mg/l)	SDWA Maximum Contaminant Level (MCL)[c] (mg/l)	For Use In Special Circumstances SDWA/MCLG (mg/l)	CWA Ambient Water Quality Criteria for Protection of Aquatic Life[k] Freshwater Acute/Chronic (mg/l)	WQCC Surface Water Quality Standard[d] Drinking Water/ Agriculture (mg/l)	ARAR (mg/l)	Comment
Metals								
Aluminum	-	/5.0	-	-	-	0.150	0.2U	WQCC Surface Water Aquatic Life Standard is applicable. Default to detection limit.
Antimony	0.06U	-	-	-	-	-		No Standard. RCRA Subpart F background (0.064) is TBC.
Arsenic	0.05	0.05/0.1	0.05	-	0.8[g]/0.048[g]	0.05	0.05	WQCC Surface Water Drinking Water Standard is applicable.
Barium	1.0	1.0/	1.0	1.5[f]	-	-	1.0	WQCC Surface Water Drinking Water Standard is applicable.
Beryllium	0.005U	/0.1	-	-	0.1[g]/.0053[g]	0.1	0.1	WQCC Surface Water Agricultural Standard is applicable.
Cadmium	0.01	0.01/0.01	0.01	0.005	0.0039[h]/0.0011[h]	<0.005	0.005U	WQCC Surface Water Aquatic Life Standard is applicable. Default to detection limit.
Calcium	-	-	-	-	-	-		No Standard
Chromium III	0.05 (tot)	0.05/0.1	-	-	1.7[h]/0.2[h]	0.01	0.01	WQCC Surface Water Aquatic Life Standard is applicable.

TABLE E-2.2 (cont.)
ANALYSIS OF CHEMICAL SPECIFIC ARARs FOR METALS
DETECTED ABOVE BACKGROUND IN SURFACE WATER AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

Chemical	RCRA Subpart F Concentration Limit[a] (mg/l)	WQCC Ground Water Standard Human Health/ Agriculture[b] (mg/l)	SDWA Maximum Contaminant Level (MCL)[c] (mg/l)	For Use In Special Circumstances SDWA/MCLG (mg/l)	CWA Ambient Water Quality Criteria for Protection of Aquatic Life[k] Freshwater Acute/Chronic (mg/l)	WQCC Surface Water Quality Standard[d] Drinking Water/ Agriculture (mg/l)	ARAR (mg/l)	Comment
Metals (cont.)								
Chromium VI	0.05 (tot)	0.05/0.1	0.05	0.0012	0.016/.011	0.01	0.01	WQCC Surface Water Aquatic Life Standard is applicable.
Cobalt	-	0.05	-	-	-	0.05		WQCC Groundwater Standard is TBC.
Copper	0.046	1.0/0.2	1.0	1.3[f]	0.018[h]/0.012[h]	0.025	0.025U	WQCC Surface Water Aquatic Life Standard is applicable. Default to detection limit.
Iron	-	0.3/5.0	0.3	-	-	1.0 (0.3)	1.0 (0.3)	WQCC Surface Water Drinking Water Standard is applicable.
Lead	0.05	0.05/0.1	0.05	0.002[f]	0.0082[h]/.0032	<0.005	0.005U	WQCC Surface Water Aquatic Life Standard is applicable. Default to detection limit.
Lithium	-	/2.5	-	-	-	-		WQCC Ground Water Agricultural Standard is TBC.
Magnesium	-	-	-	-	-	-		No Standard
Manganese	-	0.05/0.2	0.05	-	-	1.0(0.05)	1.0 (0.05)	WQCC Surface Water Drinking Water Standard is applicable.

TABLE E-2.2 (cont.)
ANALYSIS OF CHEMICAL SPECIFIC ARARs FOR METALS
DETECTED ABOVE BACKGROUND IN SURFACE WATER AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

Chemical	RCRA Subpart F Concentration Limit[a] (mg/l)	WQCC Ground Water Standard Human Health/ Agriculture[b] (mg/l)	SDWA Maximum Contaminant Level (MCL)[c] (mg/l)	For Use In Special Circumstances SDWA/MCLG (mg/l)	CWA Ambient Water Quality Criteria for Protection of Aquatic Life[k] Freshwater Acute/Chronic (mg/l)	WQCC Surface Water Quality Standard[d] Drinking Water/ Agriculture (mg/l)	ARAR (mg/l)	Comment
Metals (cont.)								
Mercury	0.002	0.002/0.01	0.002	0.003	0.0024/0.000012	0.0001	0.0002U	WQCC Surface Water .1Aquatic Life Standard is applicable. Default to detection limit.
Molybdenum	-	/0.1	-	-	-	-		WQCC Ground-water Agriculture Standard is TBS.
Nickel	0.0185	/0.20	-	-	1.8[h]/.096[h]	<0.04	0.04U	WQCC Surface Water Aquatic Life Standard is applicable. Default to detection limit.
Potassium	-	-	-	-	-	-		No Standard
Selenium	0.01	0.01/0.02	0.01	0.045[f]	0.26/0.35	0.01	0.01	WQCC Surface Water Drinking Water Standard is applicable.
Sodium	-	-	-	-	-			No Standard
Strontium	-	-	-	-	-	-		
Vanadium	1.65	/0.1	-	-	-	-		WQCC Ground-water Agricultural Standard is TBC.
Zinc	0.0517[j]	5.0/2.0	5.0	-	0.32[h]/0.047[h]	0.05	0.05	WQCC Surface Water Aquatic Life Standard is applicable.

*Notes on the next page.

(a) - 40 CFR Part 264.92 Subpart F
(b) - 5 CCR 1002-8, Section 3.11.5, Ground Water Quality Standards
(c) - 40 CFR Part 141.11 National Primary Drinking Water Standards
(d) - 5 CCR 1002-8, Section 3.8.29, Final Rule Effective March 30, 1990 (Total Recoverable Concentrations). Most stringent standard from aquatic life, agricultural, or drinking water is shown.
(f) - Proposed value as of October 1986
(g) - Lowest Observed Effect Level
(h) - Hardness dependent criteria (100 mg/l)
(K) - Clean Water Act, Section 304
(J) - RCRA 40 CFR 264, Appendix IX, Ground Water Monitoring List Substance not Included in 40 CFR 261, Appendix VIII, List of Hazardous Constituents
ARAR - Applicable or relevant and appropriate
CWA - Clean Water Act
MCL - Maximum Contaminant Level
MCLG - Maximum Contaminant Level Goal
NS - No standard
R&A - Relevant and Appropriate
RCRA - Resource Conservation and Recovery Act
SDWA - Safe Drinking Water Act
WQCC - Colorado Water Quality Control Commission

TABLE E-2.3
ANALYSIS OF CHEMICAL SPECIFIC ARARs FOR OTHER INORGANIC
CONSTITUENTS DETECTED ABOVE BACKGROUND IN SURFACE WATER AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

Chemical	RCRA Subpart F Concentration Limit[a] (mg/l)	WQCC Ground Water Standard Human Health/ Agriculture[b] (mg/l)	SDWA Maximum Contaminant Level (MCL)[c] (mg/l)	For Use In Special Circumstances SDWA/MCLG (mg/l)	CWA Ambient Water Quality Criteria for Protection of Aquatic Life[k] Freshwater Acute/Chronic (mg/l)	WQCC Surface Water Quality Limited Standard[d] Drinking Water/ Agriculture (mg/l)	ARAR (unless otherwise noted)	Comment
Conventional Pollutants								
Nitrite	-	1.0 as N/ 10.0 as N	-	-	-	1[g]/10[h]	1.0	WQCC Surface Water Standard is applicable
Nitrate	-	10.0 as N/ 100 as NO_2+NO_3-N	10	-	-	10[i]/100[h]	10.0	WQCC Surface Water Standard is applicable
Chloride	-	250/	250	-	-	250/	250	WQCC Surface Water Standard is applicable
Sulfate	-	250/	250[f]	-	-	250/	250	WQCC Surface Water Standard is applicable
Bicarbonate as $CaCO_3$	-	-	-	-	-	-		No Standard

TABLE E-2.4
ANALYSIS OF CHEMICAL SPECIFIC ARARs FOR RADIONUCLIDES
DETECTED ABOVE BACKGROUND IN SURFACE WATER AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

Chemical	RCRA Subpart F Concentration Limit[a] (pCi/l)	WQCC Ground Water Quality Standards[b] (pCi/l)	SDWA Maximum Contaminant Level (MCL)[c] (pCi/l)	For Use In Special Circumstances SDWA/MCLG (pCi/l)	CWA Ambient Water Quality Criteria for Protection of Aquatic Life[k] Freshwater Acute/Chronic (pCi/l)	WQCC Surface Water Quality Standards[d] (pCi/l)	ARAR (pCi/l)	Comment
Radionuclides								
Gross Alpha	-	15	15	-	-	11	11	WQCC Surface Water Standard for Walnut Creek is applicable
Gross Beta	-	4 mrem/yr[e]	50	-	-	19	19	WQCC Surface Water Standard for Walnut Creek is applicable
$Pu^{238,239,240}$	-	15	40[f]	-	-	0.05	0.05	WQCC Surface Water Standard is applicable
Am^{241}	-	-	4[f]	-	-	0.05	0.05	WQCC Surface Water Standard is applicable
H^{3}	-	20,000	20,000	-	-	500	500	WQCC Surface Water Standard is applicable
$Sr^{89,90}$	-	8	8	-	-	8	8	WQCC Surface Water Standard is applicable

TABLE E-2.3 (cont.)
ANALYSIS OF CHEMICAL SPECIFIC ARARs FOR OTHER INORGANIC
CONSTITUENTS DETECTED ABOVE BACKGROUND IN SURFACE WATER AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

Chemical	RCRA Subpart F Concentration Limit[a] (mg/l)	WQCC Ground Water Standard Human Health/ Agriculture[b] (mg/l)	SDWA Maximum Contaminant Level (MCL)[c] (mg/l)	For Use In Special Circumstances SDWA/MCLG (mg/l)	CWA Ambient Water Quality Criteria for Protection of Aquatic Life[k] Freshwater Acute/Chronic (mg/l)	WQCC Surface Water Quality Limited Standard[d] Drinking Water/ Agriculture (mg/l)	ARAR (unless otherwise noted)	Comment
Conventional Pollutants (cont.)								
T.D.S.	-	400 mg/l or 1.25 times background, whichever is least restrictive	500[f]	-	-	-		WQCC Ground Water Standard is TBC.

(a) - 40 CFR Part 264.92 Subpart F releases from individual hazardous substance sites
(b) - 5 CCR 1002-8, Section 3.11.5, Groundwater Quality Standards
(c) - 40 CFR Part 141.11(b,c) National Primary Drinking Water Standards
(d) - 5 CCR 1002-8, Section 3.8.29, Final Rule Effective March 30, 1990.
(f) - 40 CFR Part 143.3 National Secondary Drinking Water Standards
(g) - To be applied at the point of water supply intake
(h) - In order to provide such a reasonable margin of safety to allow for unusual situations such as extremely high water ingestion or nitrite formation in slurries, the NO_3-N plus NO_2-N content in drinking waters for livestock and poultry should be limited to 100 ppm or less, and the NO_2-N content alone be limited to 10 ppm or less.
(i) - A combined total of Nitrite and Nitrate at the point of intake to the domestic water supply shall not exceed 10 mg/l.
(k) - Clean Water Act, Section 304

ARAR - Applicable or relevant and appropriate requirements
CWA - Clean Water Act
MCLG - Maximum contaminant level goal
NS - No standard
RCRA - Resource Conservation and Recovery Act
SDWA - Safe Drinking Water Act
WQCC - Water Quality Control Commission

TABLE E-2.4 (cont.)
ANALYSIS OF CHEMICAL SPECIFIC ARARs FOR RADIONUCLIDES
DETECTED ABOVE BACKGROUND IN SURFACE WATER AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

Chemical	RCRA Subpart F Concentration Limit[a] (pCi/l)	WQCC Ground Water Quality Standards[b] (pCi/l)	SDWA Maximum Contaminant Level (MCL)[c] (pCi/l)	For Use In Special Circumstances SDWA/MCLG[d] (pCi/l)	CWA Ambient Water Quality Criteria for Protection of Aquatic Life[k] Freshwater Acute/Chronic (pCi/l)	WQCC Surface Water Quality Standards[e] (pCi/l)	ARAR (pCi/l)	Comment
Radionuclides (cont.)								
Uranium[total]	-	-	-	-	-	10	10	WQCC Surface Water Standard for Walnut Creek is applicable

(a) - 40 CFR Part 264.92 Subpart F releases from individual hazardous substance sites
(b) - 5 CCR 1002-8, Section 3.11.5(B), Basic Standards Applicable to Ground Waters of the State
(c) - 40 CFR Parts 141.15, 16, National Primary Drinking Water Standards
(d) - 5 CCR 1002-8, Section 3.8.29, Final Rule Effective March 30, 1990.
(e) - For beta and photon emitters, if two or more radionuclides are present, the sum of their annual dose equivalent to the total body or to any organ shall not exceed 4 mrem per year. Except for Tritium and Strontium 90 the concentration of man-made radionuclides causing 4 mrem total body or organ dose equivalents shall be calculated on the basis of a 2 liter per day drinking water intake using the 168-hour data listed in "Maximum Permissible Body Burden and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure," NBS Handbook 69, as amended, August 1963, US Department of Commerce.
(f) - Proposed value in drinking water yielding a risk equal to that from a dose rate of 4 mrem/year, September 30, 1986 (51 FR 34859).
(k) - Clean Water Act, Section 304.

Am - Americium
ARAR - Applicable or relevant and appropriate requirements
CWA - Clean Water Act
H^3 - Tritium
MCL - Maximum contaminant level
MCLG - Maximum contaminant level goal
Pu - Plutonium
RCRA - Resource Conservation and Recovery Act
SDWA - Safe Drinking Water Act
Sr - Strontium
WQCC - Water Quality Control Commission

TABLE E-3.1
ANALYSIS OF ACTION SPECIFIC ARARs
FOR REMEDIAL ACTIONS AT OPERABLE UNIT 2, SOUTH WALNUT CREEK

Action	Requirement	Prerequisite	Citation	ARAR	Comments
Treatment	BDAT standards for spent solvent wastes and dioxin-containing wastes are based on one of four technologies or combinations; for waste waters, (1) steam stripping, (2) biological treatment, or (3) carbon absorption [alone or in combination with (1) or (2)]; and for all other wastes, incineration. Any technology may be used, however, if it will achieve the concentration levels specified.	Effective November 8, 1988, disposal of contaminated soil or debris resulting from CERCLA response actions or RCRA corrective actions is subject to land disposal prohibitions and/or treatment standards established for spent solvent wastes, dioxin-containing wastes, and "California List" wastes.	RCRA Sections 3004(d)(3), (e)(3) 42 U.S.C. 6924(d)(3), (e)(3)	Applicable	Movement of excavated soil on-site or transportation of soil off-site for disposal must be treated to attain levels achievable by best demonstrat ed available treatment technologies before being land-disposed.
Hazardous Waste Generation	Standards applicable to generators including waste accumulation, recordkeeping, container labelling, manifesting, etc.	Waste must be identifiable as hazardous per 40 CFR Part 261	40 CFR Part 262	Applicable	Wastes generated in proposed action may be identifiable as hazardous wastes. Examples may include treatment sludge, excavated soils, used treatment materials. R&A if wastes are not hazardous.
Hazardous Waste Transportation	Hazardous waste shipment off-site is subject to DOT regulations, manifesting, recordkeeping, and discharge cleanup, etc.	Wastes must be identifiable as hazardous per 40 CFR Part 261.	40 CFR Part 263	Applicable	Wastes identifiable as hazardous must comply with applicable hazardous waste requirements for off-site shipment. R&A if not hazardous.
Excavation/ Consolidation	Consolidation in storage piles/storage tanks will trigger storage requirements.	Movement of hazardous waste (listed or characteristic) from one unit or area of contamination into another. Consolidation within a unit or area of contamination does not trigger applicability.	40 CFR Part 264 Subpart L/ 40 CFR Part 264 Subpart J	Applicable	RCRA requirements for storage in waste piles or tanks are applicable to interim storage of excavated soil destined for consolidation or off-site disposal.
	Placement on or in land outside unit boundary or area of contamination will trigger land disposal requirements and restrictions. (See Table E-3.2 for allowable constituent concentrations.)		40 CFR 268 (Subpart D)	R&A	Soil excavated during installation is subject to land disposal restrictions for wastes if placement occurs outside the area of contamination. Requirements are applicable for RCRA hazardous waste; R&A if not RCRA hazardous waste.
Ground-Water Diversion	Excavation of soil for construction of slurry wall may trigger cleanup or land disposal restrictions.	RCRA hazardous waste placed at site after November 19, 1980, or movement hazardous waste from one unit, area of contamination, or location into another unit or area of contamination.	See Excavation/ Consolidation	R&A	See Excavation/Consolidation

TABLE E-3.1 (continued)
ANALYSIS OF ACTION SPECIFIC ARARs
FOR REMEDIAL ACTIONS AT OPERABLE UNIT 2, SOUTH WALNUT CREEK

Action	Requirement	Prerequisite	Citation	ARAR	Comments
Treatment or Storage in Tanks	Tanks must have sufficient shell strength (thickness), and, for closed tanks, pressure controls, to assure that they do not collapse or rupture.	RCRA hazardous waste (listed or characteristic), held for temporary period before treatment, disposal, or storage elsewhere, (40 CFR 264.10) in a tank.	40 CFR 264.190	R&A	Applicable to treatment and storage tanks used in treating or containing water contaminated with hazardous waste. R&A if units would be excluded under RCRA, such as wastewater treatment units or if wastes are not RCRA hazardous waste.
	Waste must not be incompatible with the tank material unless the tank is protected by a liner or by other means.		40 CFR 264.191	R&A	
	New tanks or components must be provided with secondary containment.		40 CFR 264.193	R&A	
	Tanks must be provided with controls to prevent overfilling, and sufficient freeboard maintained in open tanks to prevent overtopping by wave action or precipitation.		40 CFR 264.194	R&A	
	Inspect the following: overfilling control, control equipment, monitoring data, waste level (for uncovered tanks), tank condition, above-ground portions of tanks, (to assess their structural integrity) and the area surrounding the tank (to identify signs of leakage).		40 CFR 264.195	R&A	
	Repair any corrosion, crack, or leak.		40 CFR 264.196	R&A	
	At closure, remove all hazardous waste and hazardous waste residues from tanks, discharge control equipment and discharge confinement structures.		40 CFR 264.197	R&A	

TABLE E-3.1 (continued)
ANALYSIS OF ACTION SPECIFIC ARARs
FOR REMEDIAL ACTIONS AT OPERABLE UNIT 2, SOUTH WALNUT CREEK

Action	Requirement	Prerequisite	Citation	ARAR	Comments
Treatment or Storage in Tanks (cont.)	Store ignitable and reactive waste so as to prevent the waste from igniting or reacting. Ignitable or reactive wastes in covered tanks must comply with buffer zone requirements in "Flammable and Combustible Liquids Code," Tables 2-1 through 2-6 (National Fire Protection Association, 1976 or 1981).		40 CFR 264.198	R&A	
Container Storage (On-Site)	Containers of hazardous waste must be: · Maintained in good condition;	RCRA hazardous waste (listed or characteristic) held for a temporary period before treatment, disposal, or storage elsewhere, in a container (i.e., any portable device in which a material is stored, transported, disposed of, or handled) (40 CFR 264.10).	40 CFR 264.171	Applicable	RCRA container storage requirements are applicable if hazardous wastes are stored, R&A if stored wastes are not RCRA hazardous wastes.
	· Compatible with hazardous waste to be stored; and		40 CFR 264.172		
	· Closed during storage (except to add or remove waste).		40 CFR 264.173		
	Inspect container storage areas weekly for deterioration.		40 CFR 264.174		
	Place containers on a sloped, crack-free base, and protect from contact with accumulated liquid. Provide containment system with a capacity of 10% of the volume of containers of free liquids. Remove spilled or leaked waste in a timely manner to prevent overflow of the containment system.		40 CFR 264.175		
	Keep containers of ignitable or reactive waste at least 50 feet from the facility's property line.		40 CFR 264.176		

TABLE E-3.1 (continued)
ANALYSIS OF ACTION SPECIFIC ARARs
FOR REMEDIAL ACTIONS AT OPERABLE UNIT 2, SOUTH WALNUT CREEK

Action	Requirement	Prerequisite	Citation	ARAR	Comments
Container Storage (On-Site) (cont)	Keep incompatible materials separate. Separate incompatible materials stored near each other by a dike or other barrier.		40 CFR 264.177		
	At closure, remove all hazardous waste and residues from the containment system, and decontaminate or remove all containers, liners.		40 CFR 264.178		
Off-Site Treatment Storage or Disposal	In the case of any removal or remedial action involving the transfer of any hazardous substance or pollutant or contaminant off-site, such hazardous substance or pollutant or contaminant shall only be transferred to a facility which is operating in compliance with section 3004 and 3005 of the Solid Waste Disposal Act (or where applicable, in compliance with the Toxic Substances Control Act or other applicable Federal law) and all applicable State requirements. Such substance or pollutant or contaminant may be transferred to a land disposal facility only if the President determines that both of the following requirements are met: · The unit to which the hazardous substance or pollutant or contaminant is transferred is not releasing any hazardous waste, or constituent thereof, into the ground water or surface water or soil.		SARA section 121(d)(2)(C)	Applicable	Applicable to the off-site treatment, storage, or disposal of wastes generated during on-site remedial actions.

TABLE E-3.1 (continued)
ANALYSIS OF ACTION SPECIFIC ARARs
FOR REMEDIAL ACTIONS AT OPERABLE UNIT 2, SOUTH WALNUT CREEK

Action	Requirement	Prerequisite	Citation	ARAR	Comments
Off-Site Treatment Storage or Disposal (cont)	· All such releases from other units at the facility are being controlled by a corrective action program approved by the Administrator under subtitle C of the Solid Waste Disposal Act.				
	Wastes must be treated using technology or to concentra-level by best demonstrated available technology (BDAT) for each hazardous constituent in the waste, prior to land disposal. (See Table E-3.2)	Wastes must be identifiable as hazardous per 40 CFR Part 261	40 CFR Part 268	Applicable	Applicable to wastes, other than treated effluent, such as treatment sludge, excavated soils, used treatment materials. Also applicable to on-site land disposal or "placement" outside the area of contamination. R&A if not RCRA hazardous waste.
Discharge of Storm Waters	Requires storm water discharges to be permitted under the Federal (or state) National Pollution Discharge Elimination Systems (NPDES) program. Different requirements are applicable for different classes and types of discharges.		40 CFR 122.21(g) 40 CFR 122.26, and 40 CFR 122.28	R&A	Treated effluent will be collected and treated in Pond B-5, which is subject to NPDES permit, prior to discharge off-site.
Discharge of Water into Surface Water Bodies	An NPDES permit is required for discharging water into surface water bodies.		40 CFR 122 and 40 CFR 125	R&A	Treated effluent will be collected and treated in Pond B-5, which is subject to NPDES permit, prior to discharge off-site.
	All surface water discharges must be in compliance with recently promulgated Colorado Stream Discharge Standards		5 CCR 1002-8	R&A	Treated effluent will be collected and treated in Pond B-5, which is subject to NPDES permit, prior to discharge off-site.

TABLE E-3.1 (continued)
ANALYSIS OF ACTION SPECIFIC ARARs
FOR REMEDIAL ACTIONS AT OPERABLE UNIT 2, SOUTH WALNUT CREEK

Action	Requirement	Prerequisite	Citation	ARAR	Comments
Effluent Guidelines and Standards: Pre-Treatment Standards	This section establishes pre-treatment standards (both general and categorical) for the control of pollutant discharges into Public Owned Treatment Works (POTW). Discharge of POTW must not cause pass-through interference, violation of specific prohibitions, or violations of local limitations or ordinances. POTW should either have an EPA-approved pre-treatment program or have sufficient mechanisms to meet the requirements of the national pre-treatment program in accepting CERCLA waste.		40 CFR 403.5	R&A	Treated effluent will be collected and treated in Pond B-5, which is subject to NPDES permit, prior to discharge off-site.
Discharge of Treatment System Effluent	Use of best available technology (BAT) economically achievable is required to control toxic and non-conventional pollutants. Use of best conventional pollutant control technology (BCT) is required to control conventional pollutants. Technology-basedlimitations may be determined on a case-by-case basis.		40 CFR 122.44	R&A	The remedial alternatives at Operable Unit 2 may include the discharge of treatment system effluent.
U.S. EPA Ground-Water Protection Strategy	The strategy includes guidelines on classifying ground water for EPA decisions affecting ground water protection and corrective actions. Criteria include ecological importance, replaceability, and vulnerabilityconsideration.	The protection strategy does not involve applicable ARARs but does contain policy statements to be considered.		TBC	This strategy is to be considered regarding ground water remedial alternatives for Operable Unit 2.
National Ambient Air Quality	National ambient air quality standards have been set to attain and maintain primary and secondary standards to protect public health and the environment. Requirements include a major-source permit, prevention of significant deterioration permit, non-attainable area permit, and visibility permit.		CAA Section 109 and 40 CFR 50	R&A	Remedial actions at Operable Unit 2 that may result in new sources of air emissions include incineration, excavation, and air stripping of contaminated ground water.

TABLE E-3.1 (continued)
ANALYSIS OF ACTION SPECIFIC ARARs
FOR REMEDIAL ACTIONS AT OPERABLE UNIT 2, SOUTH WALNUT CREEK

Action	Requirement	Prerequisite	Citation	ARAR	Comments
New Source Performance Standards	Standards for new sources of air emissions. Requirements are source-specific.	Need to determine if these standards apply to potential remedial actions.	CAA Section III	R&A	
Transportation of Hazardous Materials	Specific DOT requirements exist for labeling, packaging, shipping papers/manifesting, and transporting by rail, aircraft, vessel, and highway.		49 CFR 100-199	Applicable	Applicable to wastes or materials shipped off-site.
Environmental Impact of Federal Actions	A statement of environmental impact is required. Establishes provisions applicable to and binding on all federal agencies for implementing the procedural requirements of the National Environmental Policy Act (NEPA). Includes procedures for planning (Part 1501), preparing environmental impact statements (part 1502), decision-making (Part 1505), and compliance (Part 1507).		NEPA Section 102(2)(c) and 40 CFR 1500-1508; DOE 5440.1C	R&A	EPA, CDH, and DOE have reached agreement on the applicability of NEPA to RCRA/CERCLA actions.
Worker Safety	Occupational Safety and Health program for DOE contractor employees at government-owned contractor-operated facilities.		DOE 5483.1A	TBC	
Emergency Planning, Preparedness, and Response for Operations	Provide coordination direction of planning, preparedness, and response to operational emergencies in which there is a potential for personal injury, destruction of property, theft, or release of toxic, radioactive, or other hazardous material which present a potential threat to health, safety, or the environment.		DOE 5500.2	TBC	

TABLE E-3.1 (continued)
ANALYSIS OF ACTION SPECIFIC ARARs
FOR REMEDIAL ACTIONS AT OPERABLE UNIT 2, SOUTH WALNUT CREEK

Action	Requirement	Prerequisite	Citation	ARAR	Comments
General Environmental Protection Program	Establishes environmental protection program requirements, authorities, and responsibilities for DOE operations for ensuring compliance with federal and state environment protection laws and regulations, federal executive orders, and internal department policies.		DOE 5400.1	TBC	
Environmental Compliance Issue Coordination	Establishes DOE requirements for coordination of significant environmental compliance issues.		DOE 5400.2A	TBC	
Hazardous and Radioactive Mixed Waste Program	Establishes DOE hazards and radioactive mixed waste policies and requirements and implements RCRA.		DOE 5400.3	TBC	
Radiation Protection	Establishes radiation protection standards and requirements including occupationally related exposure of individuals in controlled areas.		DOE 5480.1	TBC	
Packaging and Transportation of Hazardous Materials, Hazardous Substances, hazardous wastes, and radioactive materials	Establishes requirements for packaging and transportation.		DOE 5480.3	TBC	
Comprehensive Environmental Response, Compensation and Liability Act Program	Establishes basic requirements for implementation of the Superfund at DOE facilities.		DOE 5480.14	TBC	
Environmental Protection Safety, and Health Protection Information Reporting Requirements	Establishes requirements and procedures for reporting information having environmental protection, safety, or health significance for DOE operations.		DOE 5484.1	TBC	

TABLE E-3.1 (continued)
ANALYSIS OF ACTION SPECIFIC ARARs
FOR REMEDIAL ACTIONS AT OPERABLE UNIT 2, SOUTH WALNUT CREEK

Action	Requirement	Prerequisite	Citation	ARAR	Comments
Radioactive Waste Management	Establishes policies and guidelines by which DOE manages radioactive waste, waste byproducts, and radioactively contaminated surplus facilities.		DOE 5820.2A	TBC	

TABLE E-3.2

ACTION-SPECIFIC ARARS FOR CONSTITUENTS IN WASTES FOR OFF-SITE DISPOSAL OR ON-SITE PLACEMENT, OPERABLE UNIT NO. 2 SOUTH WALNUT CREEK INTERIM REMEDIAL ACTION*

Constituent	Potential Waste Code	Treatment Standard (mg/ℓ)**	Best Demonstrated Available Technology (BDAT) Basis for Standard
Aluminum	--	--	--
Antimony	--	--	--
Arsenic	D004	5.0 (in extract)	Vitrification
Barium	D005	100	--
Beryllium	P015 (as product dust)	--	Metals Recovery[1]
Cadmium	D006	1.0	Chemical Precipitation
Calcium	--	--	--
Cesium	--	--	--
Chromium (total)	D007	5.0	Reduction and Stabilization
Cobalt	--	--	--
Copper	--	--	--
Iron	--	--	--
Lead	D008	5.0	Stabilization
Lithium	--	--	--
Magnesium	--	--	--
Manganese	--	--	--
Mercury	D009 U151	0.20 0.025	Acid Leaching and Chemical Precipitation
Molybdenum	--	--	--
Nickel	F006-F009 F011-F012	0.32	Chemical Precipitation, Settling, Filtration, and Stabilization
Potassium	--	--	--
Selenium	D010	5.7	Stabilization
Sodium	--	--	--
Strontium	--	--	--
Vanadium	--	--	--
$Pu^{238,239,240}$	--	--	--
Am^{241}	--	--	--
H^3	--	--	--

TABLE E-3.2 (continued)

ACTION-SPECIFIC ARARS FOR CONSTITUENTS
IN WASTES FOR OFF-SITE DISPOSAL OR
ON-SITE PLACEMENT, OPERABLE UNIT NO. 2
SOUTH WALNUT CREEK INTERIM REMEDIAL ACTION*

Constituent	Potential Waste Code	Treatment Standard (mg/ℓ)**	Best Demonstrated Available Technology (BDAT) Basis for Standard
$Sr^{89,90}$	--	--	--
$Uranium^{total}$	--	--	--
Carbon Tetrachloride	U211	5.6	Incineration or Fuel Substitution
	F001	0.96	Incineration
1,2 Dichloroethene	U079	33	Incineration or Fuel Substitution
1,1 Dichloroethane	U076	7.2	Incineration or Fuel Substitution
1,1 Dichloroethene	U078	33	Incineration or Fuel Substitution
Tetrachloroethene	U210	5.6	Incineration or Fuel Substitution
	F001	0.05	Incineration
Acetone	U002	160	Incineration or Fuel Substitution
	F003	0.59	Incineration
Methylene Chloride	U080	33	Incineration or Fuel Substitution
	F001	0.96	Incineration
	F002	0.96	Incineration
Trichloroethene	U228	5.6	Incineration or Fuel Substitution
	F001	0.91	Incineration
	F002	0.91	Incineration
Vinyl Chloride	U043	33	Incineration or Fuel Substitution
Multi-Source Leachate[2]	F039		

* Land Disposal Restrictions at 40 CFR Part 268

** Treatment standards are presented for non-wastewaters

1 Standard is expressed as a specific technology

2 U.S. EPA added listed hazardous waste code F039 to 40 CFR 261.31 June 1, 1990 (55 FR 22520) and defined it as "leachate resulting from the treatment, storage, or disposal of wastes classified by more than one waste code under [40 CFR Part 261] Subpart D, or from a mixture of wastes classified under Subparts C and D of this part." If this waste code is deemed applicable to a waste, the waste must meet the treatment standards (see 40 CFR Part 268 Tables CCW and CCWE) prior to land disposal.

TABLE E-4
ANALYSIS OF LOCATION-SPECIFIC ARARs
FOR REMEDIAL ACTIONS AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

LOCATION	CITATION	REQUIREMENT	ARAR TYPE*	COMMENTS
Fault zones	40 CFR 264.18(a)	RCRA regulations specify that hazardous waste treatment, storage, or disposal must not take place within 200 feet of a Holocene fault.	R&A	No faults displaced during Holocene times exist within 200 feet of this site.
Flood plain	40 CFR 264.18(b)	Any RCRA treatment, storage, or disposal facility which lies within a 100-year floodplain must be designed, constructed and operated to avoid washout.	R&A	This site is not located within a 100-year floodplain.
Siting of Hazardous Waste Disposal Sites	Colorado Hazardous Waste Act, Sections 25-15-101, 203, 208, 302	Outlines siting criteria for hazardous waste disposal sites.	R&A	Although the proposed action involves the treatment of water rather than disposal of hazardous wastes, these criteria are considered in the siting of the unit.
Siting of Wastewater Treatment Facilities	Colorado Water Quality Control Act Section 25-8-202 and 25-8-702	CDH Water Quality Control Division must approve locations of wastewater treatment facilities.	R&A	Applicable to domestic wastewater treatment facilities, relevant and appropriate to the proposed action.
Siting within an area where action may cause irreparable harm, loss, or destruction of significant articles.	36 CFR Part 65, National Historic Preservation Act	Planned actions must avoid threatening significant scientific, prehistorical, historical, or archeological data.	Applicable	Proposed activities will not threaten significant scientific, historic, prehistoric, or archeological artifacts.
Siting on or near historic property owned or controlled by Federal agency.	36 CFR Part 800, National Historic Preservation Act	Action to preserve historic properties; planning of action to minimize harm to National Historic Landmarks, included in or eligible for the National Register of Historic Places	Applicable	Proposed activities will not disturb known or suspected historic sites. Refer to Sections 2.2.7 and 7.4

TABLE E-4 (continued)
ANALYSIS OF LOCATION-SPECIFIC ARARs
FOR REMEDIAL ACTIONS AT OPERABLE UNIT NO. 2, SOUTH WALNUT CREEK

LOCATION	CITATION	REQUIREMENT	ARAR TYPE*	COMMENTS
Siting on critical habitat of endangered or threatened species.	50 CFR Parts 200, 402, 33 CFR Parts 320-330	Action to conserve endangered or threatened species.	Applicable	Proposed activities will not adversely affect endangered or threatened species. Refer to Section 2.2.5 and 7.3.
Wetlands	40 CFR Part 6, Appendix A	Actions must minimize the destruction, loss, or degradation of wetlands, as defined by Executive Order 11990, Section 7.	Applicable	Proposed activities will not adversely affect wetlands. Refer to Sections 2.2.6 and 7.3.
	40 CFR Parts 230, 231	Actions must not discharge dredged or fill material into wetlands without permit.	Applicable	Proposed activities will not adversely affect wetlands.
Area affecting stream or river.	40 CFR 6.302	Action must protect fish or wildlife.	Applicable	Proposed action will be protective of potentially affected fish and wildlife resources. Refer to Sections 2.2.3.1 and 7.3.

* The ARAR types designated reflect the application status of each requirement when preparation of this IM/IRA began. In response to these requirements, investigations were performed and the results are indicated in the Comments column which reflect the lack of any location-specific ARAR requirements which would preclude the proposed activity.

APPENDIX F

CALCULATION SPREAD SHEET

TABLE F-1

FLOW WEIGHTED MAXIMUM CONCENTRATIONS

ANALYTE	ARAR	(1) SW-61 (Flow = 37.5 GPM)		SW059 (Flow = 4.5 GPM)		FLOW WEIGHTED AVERAGE CONCENTRATION	FLOW WEIGHTED MAXIMUM CONCENTRATION
VOLATILE ORGANICS		(2)	(3)				
(Concentration Units = ug/l)		C avg	C max	C avg	C max		
Vinyl Chloride	2	6	15	5	10	6	14
Methylene Chloride (4,5)	5 U	7	44	3	5	7	40
Acetone (4,5)	10 U	13	130	6	13	12	117
1,1-Dichloroethene	7	7	143	21	133	9	142
1,1-Dichloroethane (5)	5 U	3	6	3	6	3	6
1,2-Dichloroethene (total)(5)	5 U	3	5	10	56	4	10
Chloroform	1 U	18	79	38	82	20	79
Carbon Tetrachloride	5	24	173	284	605	52	219
Trichloroethene	5	29	140	98	260	36	153
Tetrachloroethene	1 U	39	280	94	270	45	279
DISSOLVED METALS							
(Concentration Units = mg/l)		C avg	C max	C avg	C max		
Beryllium (Be)	0.005 U	0.0026	0.0053	0.0025	0.0050	0.0026	0.0053
Manganese (Mn)	0.050	0.1014	0.6430	0.0144	0.0461	0.0921	0.5790
Strontium (Sr) (6)	0.396	0.1936	0.8000	0.5650	1.1700	0.2334	0.8396
Tin (Sn)	0.100	0.0797	1.0000	0.0500	0.1000	0.0765	0.9036
TOTAL METALS							
(Concentration Units = mg/l)		C avg	C max	C avg	C max		
Aluminum (Al)	2.000 U	3.9927	25.4000	6.6900	22.8000	4.2817	25.1214
Antimony (Sb) (5)	0.064 U	0.0309	0.0611	0.0403	0.1020	0.0319	0.0655
Barium (Ba)	1.000	0.2283	2.0200	0.2094	0.4610	0.2263	1.8530
Beryllium (Be)	0.100 U	0.0051	0.0572	0.0037	0.0076	0.0050	0.0519
Cadmium (Cd)	0.010	0.0030	0.0142	0.0025	0.0050	0.0029	0.0132
Chromium (Cr)	0.050	0.0151	0.2120	0.0090	0.0232	0.0144	0.1918
Cobalt (Co)	0.050 U	0.0295	0.1320	0.0250	0.0500	0.0290	0.1232
Copper (Cu)	0.200	0.0271	0.2930	0.0215	0.0446	0.0265	0.2664
Iron (Fe)	1.000	12.0000	204.0000	5.7857	17.0000	11.3342	183.9643
Lead (Pb)	0.050	0.0140	0.2150	0.0124	0.0317	0.0138	0.1954
Lithium (Li)	2.500	0.0533	0.1520	0.4608	2.5600	0.0970	0.4100
Manganese (Mn)	1.000	0.3603	3.6800	0.0723	0.1970	0.3294	3.3068
Mercury (Hg)	0.002	0.0002	0.0024	0.0002	0.0006	0.0002	0.0022
Molybdenum (Mo)	0.100	0.0561	0.1740	0.0449	0.0191	0.0549	0.1574
Nickel (Ni)	0.200	0.0294	0.2460	0.0200	0.0400	0.0284	0.2239
Selenium (Se)	0.010	0.0026	0.0059	0.0044	0.0160	0.0028	0.0070
Strontium (Sr) (6)	0.382	0.2317	0.8000	0.6096	1.3600	0.2722	0.8600
Vanadium (V)	0.100	0.0499	0.5550	0.0347	0.0595	0.0483	0.5019
Zinc (Zn)	2.000	0.2363	1.1900	0.8141	2.6600	0.2982	1.3475

TABLE F-1 (Cont)
FLOW WEIGHTED MAXIMUM CONCENTRATIONS

ANALYTE	ARAR	SW-61 (Flow = 37.5 GPM)		SW059 (Flow = 4.5 GPM) (1)		FLOW WEIGHTED AVERAGE CONCENTRATION	FLOW WEIGHTED MAXIMUM CONCENTRATION
DISSOLVED RADIONUCLIDES							
(Concentration Units = pCi/l)		C avg	C max	C avg	C max		
Gross Alpha	11.00	3.800	20.600	11.000	16.000	4.571	20.107
Gross Beta	19.00	10.000	43.700	5.100	8.240	9.475	39.901
Total Uranium	10.00	4.900	10.260	6.600	7.500	5.082	9.964
TOTAL RADIONUCLIDES							
(Concentration Units = pCi/l)		C avg	C max	C avg	C max		
Gross Alpha	11.00	73.000	780.000	96.000	310.000	75.464	729.643
Gross Beta	19.00	56.000	570.000	96.000	340.000	60.286	545.357
Plutonium 239, 240	0.05	0.320	3.300	0.750	3.100	0.366	3.279
Americium 241	0.05	0.083	0.440	0.300	1.300	0.106	0.532
Total Uranium	10.00	5.500	11.100	7.900	16.600	5.757	11.689
TOTAL INORGANICS							
(Concentration Units = mg/l)		C avg	C max	C avg	C max		
Total Dissolved Solids	400	411.0	3300.0	477.0	580.0	418.1	3008.6

(1) Collection at SW-61 includes flows from surface water stations SW056, SW060, SW061 and SW101.

(2) C avg = Average Analyte Concentration. For a group of stations (e.g. South Walnut Creek) C avg is computed by first determining the arithmetic mean concentration at individual stations and then using this data to compute the arithmetic mean for the stations in the group. If a datum indicates non-detected (i.e. 'U' designation), the value used in computation of the arithmetic mean is one-half the Contract Required Detection Limit (CRDL). In cases where a station or group of stations has many non-detect results in addition to one or more results below the detection limit for a containment, the calculated C avg may be greater than C max.

(3) C max = Maximum Analyte Concentration. C max is the maximum detected concentration in the entire data set for the station or group of stations. If the analyte is not detected (i.e. 'U' designation) in any of the station samples, C max is set equal to the CRDL.

(4) Methylene chloride and acetone were detected in several laboratory blanks. Surface water data in which these common laboratory contaminants wree detected in blanks are evaluated for computation of C avg and C max as follows: If the datum is less than 10 times the concentration found in the corresponding blanks, the datum is evaluated as a non-detect, 5U and 10U for methylene chloride and acetone, respectively. If the datum is greater than 10 times the concentration found in the corresponding blanks, the datum is evaluated at the concentration reported by the sample analysis.

(5) ARAR value for this constituent is TBC.

(6) No ARAR or TBC value exists for this constituent. The value listed as ARAR for this constituent is background concentration which is considererd as an IM/IRA treatment goal.

APPENDIX G

RISK ASSESSMENT CALCULATIONS

Risk Calculation Worksheet

South Walnut Creek Basin
Surface Water Treatment
Fugative Dust during construction
Exposure of the Public

Written: 09-Jan-91
Author: DCPalmer/KKerrigan
Printed: 09-Jan-91

Constants:

kg/mg	1.00E-06	
gm/kg	1.00E+03	
gm/mg	1.00E-03	
m3/ml	1.00E-06	
Sec Per Min	60	

Adult Body Weight	BWa	70	kg
Child Body Weight	BWc	15	kg
Adult Inhalation Rate	IRa	0.83	Cubic meters/hour
Worker Inhalation Rate	IRw	1.4	Cubic meters/hour
Child Inhalation Rate	IRc	0.625	Cubic meters/hour

Operationing Release Parameters

Exposure Time	ET	8	Hours/day
Exposure Frequency	EF	60	Days/year
Adult Exposure Duration	EDa	1	Years
Youth Exposure Duration	EDy	0	Years
Child Exposure Duration	EDc	1	Years
Averaging Time (carc.)	ATc	25550	Days
Adult Avg Time (non-carc.)	ATna	365	Days
Child Avg Time (non-carc.)	ATnc	365	Days

Public Dispersion Factor	Chi over Q	1.40E-06	sec/cubic meter
	Airborn Dust	NA	mg/cubic meter
	Constr. Area	1.0	acres
	Dust Source	4.20E-04	kg/sec
	Job Duration	1.00	Years

Carcinogenic:(g)	Soil Conc (mg/kg)	Slope Factor SF	Source (mg/sec)	Air Conc (mg/m3)	Adult Intake (mg/kg-day)	Adult Risk	Child Lifetime Risk
Arsenic	2.64E+03	5.00E+01 (b)	1.11E+00	1.55E-06	3.47E-10	1.74E-08	6.08E-08
Beryllium	1.00E+00	8.40E+00 (b)	4.20E-04	5.88E-10	1.32E-13	1.10E-12	3.87E-12
Bis-(2-ethylhexyl)phthalate	1.95E+00	1.40E-02 (d)	8.19E-04	1.15E-09	2.56E-13	3.59E-15	1.26E-14
Cadmium	3.00E+00	6.10E+00 (b)	1.26E-03	1.76E-09	3.95E-13	2.41E-12	8.42E-12
Chromium	5.33E+00	4.10E+01 (b)	2.24E-03	3.13E-09	7.01E-13	2.87E-11	1.01E-10
Nickel	4.70E+03	8.40E-01 (b)	1.97E+00	2.76E-06	6.18E-10	5.19E-10	1.82E-09
Total						1.79E-08	6.27E-08

Non-carcinogenic:(g)	Soil Conc (mg/kg)	RfC/RfD	Source (mg/sec)	Air Conc (mg/m3)	Adult Intake (mg/kg/day)	Adult Risk	Child Intake (mg/kg/day)	Child Risk
Bis-(2-ethylhexyl)phthalate	1.95E+00	2.00E-02 (e)	8.19E-04	1.15E-09	1.80E-11	8.98E-10	6.28E-11	3.14E-09
Barium	4.70E+01	1.00E-03 (a,b)	1.98E-02	2.77E-08	4.33E-10	4.33E-07	1.52E-09	1.52E-06
Chromium	5.33E+00	4.00E-06 (a,c)	2.24E-03	3.13E-09	4.91E-11	1.23E-05	1.72E-10	4.29E-05
Mercury	1.00E-01	8.40E-05 (a,c)	4.20E-05	5.88E-11	9.21E-13	1.10E-08	3.22E-12	3.84E-08
Manganese	1.30E+02	1.14E-04 (a,b)	5.44E-02	7.62E-08	1.19E-09	1.05E-05	4.18E-09	3.66E-05
Total						2.32E-05		8.11E-05

Radionuclides:	Soil Conc (uCi/gm)	DCF(f) (mrem/uCi)	Source (uCi/sec)	Air Conc (uCi/m3)	Adult Intake (uCi)	Adult Dose (mrem)
Uranium	2.20E-05	1.30E+05	9.24E-06	1.29E-11	5.17E-09	6.73E-04
Americium	3.00E-06	5.20E+05	1.26E-06	1.76E-12	7.06E-10	3.67E-04
Plutonium	1.80E-05	3.30E+05	7.56E-06	1.06E-11	4.23E-09	1.40E-03
Total	4.30E-05					2.44E-03

(a)Subchronic Inhalation RfC values utilized.
(b)Inhalation value from IRIS.
(c)Inhalation value from HEAST, 4th Quarter, FY 1990.
(d)Oral value from IRIS.
(e)Subchronic RfD value from HEAST, 4th Quarter, FY 1990. RfC not available.
(f)Internal Dose Conversion Factors from DOE/EH-0071.
(g)Metals included in risk analysis include only those which have Slope Factors or RfCs available.

Dust Source = (1.2 tons/acre-month * Construction Area / (30 * 24 * 3600)) * 2000 lb\ton * .4536 kg/lb
Source = Dust source * Soil Concentration
Air concentration = source * (X/Q)
Intake = (Air concentration * IR * ET * EF * ED) / (BW * AT)
Risk (for cancer) = Intake * Slope Factor
Risk (non-cancer) = Intake / RfC or RfD
Intake (radionuclides) = air concentration * IR * ET * EF * job duration
Dose (radionuclides) = Intake * Dose Conversion Factor (DCF)

Risk Calculation Worksheet

South Walnut Creek Basin
Surface Water Treatment
Fugative Dust during construction
Exposure of Construction Workers

Written: 09-Jan-91
Author: DCPalmer/KK
Printed: 09-Jan-91

Constants:

kg/mg	1.00E-06
gm/kg	1.00E+03
gm/mg	1.00E-03
m3/ml	1.00E-06
Sec Per Min	60

Adult Body Weight	BWa	70	kg
Child Body Weight	BWc	15	kg
Adult Inhalation Rate	IRa	0.83	Cubic meters/hour
Worker Inhalation Rate	IRw	1.4	Cubic meters/hour
Child Inhalation Rate	IRc	0.625	Cubic meters/hour

Operationing Release Parameters

Exposure Time	ET	8	Hours/day
Exposure Frequency	EF	60	Days/year
Adult Exposure Duration	EDa	1	Years
Youth Exposure Duration	EDy	NA	Years
Child Exposure Duration	EDc	NA	Years
Averaging Time (carc.)	ATc	25550	Days
Adult Avg Time (non-carc.)	ATna	365	Days
Child Avg Time (non-carc.)	ATnc	NA	Days
Worker Dispersion Factor	Chi over Q	NA	sec/cubic meter
	Airborn Dust	5	mg/cubic meter
	Constr. Area	NA	acres
	Dust Source	NA	kg/sec
	Job Duration	1.00	Years

Carcinogenic:(g)

	Soil Conc (mg/kg)	Slope Factor SF	Source (mg/sec)	Air Conc (mg/m3)	------Adult------- Intake (mg/kg-day)	Risk
Arsenic	2.64E+03	5.00E+01 (b)	NA	1.32E-02	2.95E-06	1.47E-04
Beryllium	1.00E+00	8.40E+00 (b)	NA	5.00E-06	1.12E-09	9.39E-09
Bis-(2-ethylhexyl)phthalate	1.95E+00	1.40E-02 (d)	NA	9.75E-06	2.18E-09	3.05E-11
Cadmium	3.00E+00	6.10E+00 (b)	NA	1.50E-05	3.35E-09	2.05E-08
Chromium	5.33E+00	4.10E+01 (b)	NA	2.67E-05	5.96E-09	2.44E-07
Nickel	4.70E+03	8.40E-01 (b)	NA	2.35E-02	5.26E-06	4.41E-06
Total						1.52E-04

Non-carcinogenic:(g)

	Soil Conc (mg/kg)	RfC/RfD(a)	Source (mg/sec)	Air Conc (mg/m3)	------Adult------- Intake (mg/kg/day)	Risk
Bis-(2-ethylhexyl)phthalate	1.95E+00	2.00E-02 (e)	NA	9.75E-06	1.53E-07	7.63E-06
Barium	4.70E+01	1.00E-03 (a,b)	NA	2.35E-04	3.68E-06	3.68E-03
Chromium	5.33E+00	4.00E-06 (a,c)	NA	2.67E-05	4.17E-07	1.04E-01
Mercury	1.00E-01	8.40E-05 (a,c)	NA	5.00E-07	7.83E-09	9.32E-05
Manganese	1.30E+02	1.14E-04 (a,b)				1.08E-01
Total						

Radionuclides:

	Soil Conc (uCi/gm)	DCF(f) (mrem/uCi)	Source (uCi/sec)	Air Conc (uCi/m3)	------Adult------- Intake (uCi)	Dose (mrem)
Uranium	2.20E-05	1.30E+05	NA	1.10E-07	4.40E-05	5.72E+00
Americium	3.00E-06	5.20E+05	NA	1.50E-08	6.00E-06	3.12E+00
Plutonium	1.80E-05	3.30E+05	NA	9.00E-08	3.60E-05	1.19E+01
Total	4.30E-05					2.07E+01

(a)Subchronic Inhalation RfC values utilized.
(b)Inhalation value from IRIS.
(c)Inhalation value from HEAST, 4th Quarter, FY 1990.
(d)Oral value from IRIS.
(e)Subchronic RfD value from HEAST, 4th Quarter, FY 1990. RfC not available.
(f)Internal Dose Conversion Factors from DOE/EH-0071.
(g)Metals included in risk analysis include only those which have Slope Factors or RfCs available.

Air concentration = Soil concentration * airborn dust * kg/mg
Intake = (Air concentration * IR * ET * EF * ED) / (BW * AT)
Risk (for cancer) = Intake * Slope Factor
Risk (non-cancer) = Intake / RfC or RfD
Intake (radionuclides) = air concentration * IR * ET * EF * job duration
Dose (radionuclides) = Intake * Dose Conversion Factor (DCF)

Risk Calculation Worksheet

South Walnut Creek Basin
Surface Water Treatment
Fugative Dust during construction
Exposure of Other Site Workers

Written: 09-Jan-91
Author: DCPalmer/KKerrigan
Printed: 09-Jan-91

Constants:

kg/mg	1.00E-06	
gm/kg	1.00E+03	
gm/mg	1.00E-03	
m3/ml	1.00E-06	
Sec Per Min	60	

Adult Body Weight	BWa	70	kg
Child Body Weight	BWc	15	kg
Adult Inhalation Rate	IRa	0.83	Cubic meters/hour
Worker Inhalation Rate	IRw	1.4	Cubic meters/hour
Child Inhalation Rate	IRc	0.625	Cubic meters/hour

Operationing Release Parameters

Exposure Time	ET	8	Hours/day
Exposure Frequency	EF	60	Days/year
Adult Exposure Duration	EDa	1	Years
Youth Exposure Duration	EDy	0	Years
Child Exposure Duration	EDc	1	Years
Averaging Time (carc.)	ATc	25550	Days
Adult Avg Time (non-carc.)	ATna	365	Days
Child Avg Time (non-carc.)	ATnc	365	Days

Worker Dispersion Factor	Chi over Q	2.43E-04	sec/cubic meter
	Airborn Dust	NA	mg/cubic meter
	Constr. Area	1.0	acres
	Dust Source	4.20E-04	kg/sec
	Job Duration	1.00	Years

Carcinogenic:(g)	Soil Conc (mg/kg)	Slope Factor SF	Source (mg/sec)	Air Conc (mg/m3)	------Adult------- Intake (mg/kg-day)	Risk
Arsenic	2.64E+03	5.00E+01 (b)	1.11E+00	2.69E-04	6.03E-08	3.01E-06
Beryllium	1.00E+00	8.40E+00 (b)	4.20E-04	1.02E-07	2.28E-11	1.92E-10
Bis-(2-ethylhexyl)phthalate	1.95E+00	1.40E-02 (d)	8.19E-04	1.99E-07	4.45E-11	6.23E-13
Cadmium	3.00E+00	6.10E+00 (b)	1.26E-03	3.06E-07	6.85E-11	4.18E-10
Chromium	5.33E+00	4.10E+01 (b)	2.24E-03	5.44E-07	1.22E-10	4.99E-09
Nickel	4.70E+03	8.40E-01 (b)	1.97E+00	4.80E-04	1.07E-07	9.01E-08
Total						3.11E-06

Non-carcinogenic:(g)	Soil Conc (mg/kg)	RfC/RfD(a)	Source (mg/sec)	Air Conc (mg/m3)	------Adult------- Intake (mg/kg/day)	Risk
Bis-(2-ethylhexyl)phthalate	1.95E+00	2.00E-02 (e)	8.19E-04	1.99E-07	3.12E-09	1.56E-07
Barium	4.70E+01	1.00E-03 (a,b)	1.98E-02	4.80E-06	7.52E-08	7.52E-05
Chromium	5.33E+00	4.00E-06 (a,c)	2.24E-03	5.44E-07	8.52E-09	2.13E-03
Mercury	1.00E-01	8.40E-05 (a,c)	4.20E-05	1.02E-08	1.60E-10	1.90E-06
Manganese	1.30E+02	1.14E-04 (a,b)	5.44E-02	1.32E-05	2.07E-07	1.82E-03
Total						4.02E-03

Radionuclides:	Soil Conc (uCi/gm)	DCF(f) (mrem/uCi)	Source (uCi/sec)	Air Conc (uCi/m3)	------Adult------- Intake (uCi)	Dose (mrem)
Uranium	2.20E-05	1.30E+05	9.24E-06	2.25E-09	8.98E-07	1.17E-01
Americium	3.00E-06	5.20E+05	1.26E-06	3.06E-10	1.22E-07	6.37E-02
Plutonium	1.80E-05	3.30E+05	7.56E-06	1.84E-09	7.35E-07	2.42E-01
Total	4.30E-05					4.23E-01

(a)Subchronic Inhalation RfC values utilized.
(b)Inhalation value from IRIS.
(c)Inhalation value from HEAST, 4th Quarter, FY 1990.
(d)Oral value from IRIS.
(e)Subchronic RfD value from HEAST, 4th Quarter, FY 1990. RfC not available.
(f)Dose Conversion Factors from DOE/EH-0071.
(g)Metals included in risk analysis include only those with Slope Factors or RfCs available.

Dust Source = (1.2 tons/acre-month * Construction Area / (30 * 24 * 3600)) * 2000 lb\ton * .4536 kg/lb
Source = Dust source * Soil Concentration
Air concentration = source * (X/Q)
Intake = (Air concentration * IR * ET * EF * ED) / (BW * AT)
Risk (for cancer) = Intake * Slope Factor
Risk (non-cancer) = Intake / RfC or RfD
Intake (radionuclides) = air concentration * IR * ET * EF * job duration
Dose (radionuclides) = Intake * Dose Conversion Factor (DCF)

Risk Calculation Worksheet

South Walnut Creek Basin
Surface Water Treatment
Collection Tank Venting
Exposure of the Public

Written: 07-Jan-91
Author: DCPalmer/KKerrigan
Printed: 08-Jan-91

Constants:

Liter Per Gal	3.7853	
Sec Per Min	60	
R	62.37	mmHg l/gmole K
N/V	3.28E+01	
kg/mg	1.00E-06	
gm/kg	1.00E+03	
gm/mg	1.00E-03	
m3/ml	1.00E-06	

Adult Body Weight	BWa	70	kg
Child Body Weight	BWc	15	kg
Adult Inhalation Rate	IRa	0.83	Cubic meters/hour
Worker Inhalation Rate	IRw	1.4	Cubic meters/hour
Child Inhalation Rate	IRc	0.625	Cubic meters/hour

Operationing Release Parameters

Exposure Time	ET	24	Hours/day
Exposure Frequency	EF	265	Days/year
Adult Exposure Duration	EDa	30	Years
Youth Exposure Duration	EDy	25	Years
Child Exposure Duration	EDc	5	Years
Averaging Time (carc.)	ATc	25550	Days
Adult Avg Time (non-carc.)	ATna	10950	Days
Child Avg Time (non-carc.)	ATnc	1825	Days
Public Dispersion Factor	Chi over Q	1.40E-06	sec/cubic meter
	Job Duration	NA	Years
	Flow Rate	60	gpm

Carcinogenic:

	Vapor Conc (mg/l)	Slope Factor SF	Source (mg/sec)	Air Conc (mg/m3)	Adult Intake (mg/kg/day)	Adult Risk	Child Lifetime Risk
Carbon Tetrachloride	1.97E-05	1.30E-01 (b)	7.46E-05	1.04E-10	9.29E-12	1.21E-12	2.39E-12
Acetone	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichlorethene	7.16E-05	1.20E+00 (b)	2.71E-04	3.79E-10	3.37E-11	5.66E-11	8.03E-11
1,2-Dichloroethene	1.69E-06	NA	6.42E-06	8.98E-12	7.99E-13	0.00E+00	0.00E+00
Tetrachloroethene	4.13E-06	1.80E-03 (c,f)	1.56E-05	2.19E-11	1.94E-12	4.90E-15	6.94E-15
Trichloroethene	9.41E-06	1.70E-02 (c,f)	3.56E-05	4.99E-11	4.43E-12	1.05E-13	1.49E-13
Methylene Chloride	0.00E+00	1.40E-02 (b)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl Chloride	0.00E+00	1.90E+00 (e,f)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1 Dichloroethane	3.02E-06	NA	1.14E-05	1.60E-11	1.42E-12	0.00E+00	0.00E+00
Carbon Disulfide	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Totals	1.10E-04					5.80E-11	8.28E-11

Non-carcinogenic:

	Vapor Conc (mg/l)	RfC/RfD(a)	Source (mg/sec)	Air Conc (mg/m3)	Adult Intake (mg/kg/day)	Adult Risk	Child Intake (mg/kg/day)	Child Risk
Carbon Tetrachloride	1.97E-05	7.00E-04 (a,d)	7.46E-05	1.04E-10	2.17E-11	3.10E-08	7.58E-11	1.08E-07
Acetone	0.00E+00	1.00E-01 (a,d)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichlorethene	7.16E-05	9.00E-03 (a,d)	2.71E-04	3.79E-10	7.87E-11	8.74E-09	2.75E-10	3.06E-08
1,2-Dichloroethene	1.69E-06	2.00E-02 (a,d)	6.42E-06	8.98E-12	1.86E-12	9.32E-11	6.52E-12	3.26E-10
Tetrachloroethene	4.13E-06	1.00E-02 (a,d)	1.56E-05	2.19E-11	4.54E-12	4.54E-10	1.59E-11	1.59E-09
Trichloroethene	9.41E-06	NA	3.56E-05	4.99E-11	1.03E-11	NA	3.62E-11	NA
Methylene Chloride	0.00E+00	9.00E-01 (c,f)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl Chloride	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA	0.00E+00	NA
1,1 Dichloroethane	3.02E-06	1.00E-01 (c,f)	1.14E-05	1.60E-11	3.32E-12	3.32E-11	1.16E-11	1.16E-10
Carbon Disulfide	0.00E+00	3.00E-03 (c,f)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Totals	1.10E-04					4.03E-08		1.41E-07

(a)Chronic Oral RfD utilized where Chronic Inhalation RfC not available.
(b)Inhalation value from IRIS.
(c)Inhalation value from HEAST, 4th Quarter, FY 1990.
(d)Oral value from IRIS.
(e)Oral value from HEAST, 4th Quarter, FY 1990.
(f)Value not available on IRIS.

Source = Vapor concentration * flow rate * liters per gallon/seconds per minute
Air concentration = source * (X/Q)
Intake = (Air concentration * IR * ET * EF * ED) / (BW * AT)
Risk (for cancer) = Intake * Slope Factor
Risk (non-cancer) = Intake / RfC or RfD

Risk Calculation Worksheet

South Walnut Creek Basin
Surface Water Treatment
Collection Tank Venting
Exposure of RFP Workers

Written: 07-Jan-91
Author: DCPalmer/KK
Printed: 08-Jan-91

Constants:

Liter Per Gal	3.7853	
Sec Per Min	60	
R	62.37	mmHg l/gmole K
N/V	3.28E+01	
kg/mg	1.00E-06	
gm/kg	1.00E+03	
gm/mg	1.00E-03	
m3/ml	1.00E-06	

Adult Body Weight	BWa	70	kg
Child Body Weight	BWc	15	kg
Adult Inhalation Rate	IRa	0.83	Cubic meters/hour
Worker Inhalation Rate	IRw	1.4	Cubic meters/hr
Child Inhalation Rate	IRc	0.625	Cubic meters/hour

Operationing Release Parameters

Exposure Time	ET	24	Hours/day
Exposure Frequency	EF	265	Days/year
Adult Exposure Duration	EDa	30	Years
Youth Exposure Duration	EDy	25	Years
Child Exposure Duration	EDc	5	Years
Averaging Time (carc.)	ATc	25550	Days
Adult Avg Time (non-carc.)	ATna	10950	Days
Child Avg Time (non-carc.)	ATnc	1825	Days
Worker Dispersion Factor	Chi over Q	2.69E-05	sec/cubic meter
	Job Duration	NA	Years
	Flow Rate	60	gpm

Carcinogenic:

	Conc (mg/l)	Slope Factor SF	Source (mg/sec)	Air Conc (mg/m3)	Intake (mg/kg/day)	Risk
Carbon Tetrachloride	1.97E-05	1.30E-01 (b)	7.46E-05	2.01E-09	1.78E-10	2.32E-11
Acetone	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichlorethene	7.16E-05	1.20E+00 (b)	2.71E-04	7.29E-09	6.48E-10	7.77E-10
1,2-Dichloroethene	1.69E-06	NA	6.42E-06	1.73E-10	1.53E-11	0.00E+00
Tetrachloroethene	4.13E-06	1.80E-03 (c,f)	1.56E-05	4.20E-10	3.74E-11	6.72E-14
Trichloroethene	9.41E-06	1.70E-02 (c,f)	3.56E-05	9.58E-10	8.52E-11	1.45E-12
Methylene Chloride	0.00E+00	1.40E-02 (b)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl Chloride	0.00E+00	1.90E+00 (e,f)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1 Dichloroethane	3.02E-06	NA	1.14E-05	3.08E-10	2.74E-11	0.00E+00
Carbon Disulfide	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Totals	1.10E-04					8.02E-10

Non-carcinogenic:

	Conc (mg/l)	RfC/RfD(a)	Source (mg/sec)	Air Conc (mg/m3)	Intake (mg/kg/day)	Risk
Carbon Tetrachloride	1.97E-05	7.00E-04 (a,d)	7.46E-05	2.01E-09	4.16E-10	5.95E-07
Acetone	0.00E+00	1.00E-01 (a,d)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichlorethene	7.16E-05	9.00E-03 (a,d)	2.71E-04	7.29E-09	1.51E-09	1.68E-07
1,2-Dichloroethene	1.69E-06	2.00E-02 (a,d)	6.42E-06	1.73E-10	3.58E-11	1.79E-09
Tetrachloroethene	4.13E-06	1.00E-02 (a,d)	1.56E-05	4.20E-10	8.72E-11	8.72E-09
Trichloroethene	9.41E-06	NA	3.56E-05	9.58E-10	1.99E-10	NA
Methylene Chloride	0.00E+00	9.00E-01 (c,f)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl Chloride	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	NA
1,1 Dichloroethane	3.02E-06	1.00E-01 (c,f)	1.14E-05	3.08E-10	6.39E-11	6.39E-10
Carbon Disulfide	0.00E+00	3.00E-03 (c,f)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Totals	1.10E-04					7.74E-07

(a)Chronic Oral RfD utilized where Chronic Inhalation RfC not available.
(b)Inhalation value from IRIS.
(c)Inhalation value from HEAST, 4th Quarter, FY 1990.
(d)Oral value from IRIS.
(e)Oral value from HEAST, 4th Quarter, FY 1990.
(f)Value not available on IRIS.

Source = Vapor concentration * flow rate * liters per gallon/seconds per minute
Air concentration = source * (X/Q)
Intake = (Air concentration * IR * ET * EF * ED) / (BW * AT)
Risk (for cancer) = Intake * Slope Factor
Risk (non-cancer) = Intake / RfC or RfD

Vapor concentration calculation

South Walnut Creek Basin Surface Water Treatment
Collection Tank Venting

Printed: 08-Jan-91
Written: 08-Jan-91
Author: DCPalmer

	Liq Conc (mg/l)	Molecular Weight	g_moles/l	Liq mole Fraction	Vap Press (mm Hg)	Partial Prs (mm Hg)	PP Fract	Vap Conc
Carbon Tetrachloride	2.19E-01	153.84	1.42E-06	2.57E-08	91.17	2.34E-06	3.90E-09	1.97E-05
Acetone	0.00E+00	58.08	0.00E+00	0.00E+00	185.20	0.00E+00	0.00E+00	0.00E+00
1,1-Dichlorethene	1.42E-01	96.95	1.46E-06	2.64E-08	510.56	1.35E-05	2.25E-08	7.16E-05
1,2-Dichloroethene	1.00E-02	96.95	1.03E-07	1.86E-09	171.69	3.20E-07	5.33E-10	1.69E-06
Tetrachloroethene	2.79E-01	165.85	1.68E-06	3.04E-08	14.98	4.55E-07	7.58E-10	4.13E-06
Trichloroethene	1.53E-01	131.4	1.16E-06	2.10E-08	62.28	1.31E-06	2.18E-09	9.41E-06
Methylene Chloride	0.00E+00	84.93	0.00E+00	0.00E+00	351.86	0.00E+00	0.00E+00	0.00E+00
Vinyl Chloride	0.00E+00	133.41	0.00E+00	0.00E+00	2819.28	0.00E+00	0.00E+00	0.00E+00
1,1 Dichloroethane	6.00E-03	98.96	6.06E-08	1.09E-09	510.56	5.59E-07	9.31E-10	3.02E-06
Carbon Disulfide	0.00E+00	76.14	0.00E+00	0.00E+00	306.22	0.00E+00	0.00E+00	0.00E+00
Water	0	18.02	5.54E+01	1.000E+00	18.69	1.87E+01	3.12E-02	1.84E+01
Totals	0.00E+00		5.54E+01			6.00E+02		

Gram-moles per liter = (liquid concentration / 1000) / molecular weight
Liquid mole fraction = gram-moles per liter / total gram-moles
Partial pressure = vapor pressure * liquid mole fraction
Partial pressure fraction = partial pressure / atmospheric pressure
Vapor concentration = partial pressure fraction * (N/V) * molecular weight

Vapor Pressure Calculation

Printed: 08-Jan-91
Written: 08-Jan-91
Author: DCPalmer

	T1	P1	T2	P2	T1(K)	T2(K)	(20-T1)/(T2-T1)	Log P	P
Carbon Tetrachloride	4.3	40	23	100	277.4	296.1	8.93E-01	1.96	91.17
Acetone	7.7	100	39.5	400	280.8	312.6	4.18E-01	2.27	185.20
1,1-Dichlorethene	14.8	400	31.7	760	287.9	304.8	3.67E-01	2.71	510.56
1,2-Dichloroethene	9.5	100	41	400	282.6	314.1	3.65E-01	2.23	171.69
Tetrachloroethene	13.8	10	40.1	40	286.9	313.2	2.74E-01	1.18	14.98
Trichloroethene	11.9	40	31.4	100	285	304.5	4.67E-01	1.79	62.28
Methylene Chloride	-6.3	100	24.1	400	266.8	297.2	8.98E-01	2.55	351.86
Vinyl Chloride	-28	400	-13.8	760	245.1	259.3	3.45E+00	3.45	2819.28
1,1 Dichloroethane	14.8	400	31.7	760	287.9	304.8	3.67E-01	2.71	510.56
Carbon Disulfide	-5.1	100	28	400	268	301.1	7.89E-01	2.49	306.22
Water	11.2	10	22.1	20	284.3	295.2	8.99E-01	1.27	18.69

Log P = [log(P2/P1] * (T2/294.1) * [(20-T1)/(T2-T1)]+log P1
Vapor pressure (P) = 10^(log P)
P1 is the vapor pressure at temperature T1, etc.

Risk Calculation Worksheet **South Walnut Creek Basin**
Surface Water Treatment
Influent Tank Rupture (10,000 gal)
Exposure of the Public

Written: 08-Jan-91
Author: DCPalmer/KKerrigan
Printed: 08-Jan-91

Constants:

Liter Per Gal	3.7853	
Sec Per Min	60	
R	62.37	mmHg l/gmole K
N/V	3.28E+01	
kg/mg	1.00E-06	
gm/kg	1.00E+03	
gm/mg	1.00E-03	
m3/ml	1.00E-06	

Adult Body Weight	BWa	70	kg
Child Body Weight	BWc	15	kg
Adult Inhalation Rate	IRa	0.83	Cubic meters/hour
Worker Inhalation Rate	IRw	1.4	Cubic meters/hour
Child Inhalation Rate	IRc	0.625	Cubic meters/hour

Operationing Release Parameters

Exposure Time	ET	24	Hours/day
Exposure Frequency	EF	1	Days/year
Adult Exposure Duration	EDa	1	Years
Youth Exposure Duration	EDy	0	Years
Child Exposure Duration	EDc	1	Years
Averaging Time (carc.)	ATc	25550	Days
Adult Avg Time (non-carc.)	ATna	365	Days
Child Avg Time (non-carc.)	ATnc	365	Days

Public Dispersion Factor	Chi over Q	1.27E-03	sec/cubic meter
	Job Duration	NA	Years
	Flow Rate	6.9	gpm

Carcinogenic:

	Liquid Conc (mg/l)	Slope Factor SF	Source (mg/sec)	Air Conc (mg/m3)	Adult Intake (mg/kg/day)	Adult Risk	Child Lifetime Risk
Carbon Tetrachloride	2.19E-01	1.30E-01 (b)	9.59E-02	1.22E-04	1.36E-09	1.77E-10	6.20E-10
Acetone	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichlorethene	1.42E-01	1.20E+00 (b)	6.22E-02	7.90E-05	8.84E-10	1.06E-09	3.71E-09
1,2-Dichloroethene	1.00E-02	NA	4.38E-03	5.56E-06	6.22E-11	0.00E+00	0.00E+00
Tetrachloroethene	2.79E-01	1.80E-03 (c,g)	1.22E-01	1.55E-04	1.74E-09	3.12E-12	1.09E-11
Trichloroethene	1.53E-01	1.70E-02 (c,g)	6.70E-02	8.51E-05	9.52E-10	1.62E-11	5.66E-11
Methylene Chloride	0.00E+00	1.40E-02 (b)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl Chloride	0.00E+00	1.90E+00 (e,g)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1 Dichloroethane	6.00E-03	NA	2.63E-03	3.34E-06	3.73E-11	0.00E+00	0.00E+00
Carbon Disulfide	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Totals	8.09E-01					1.26E-09	4.40E-09

Non-carcinogenic:

	Liquid Conc (mg/l)	RfC/RfD(a)	Source (mg/sec)	Air Conc (mg/m3)	Adult Intake (mg/kg/day)	Adult Risk	Child Intake (mg/kg/day)	Child Risk
Carbon Tetrachloride	2.19E-01	7.00E-03 (a,e)	9.59E-02	1.22E-04	9.54E-08	1.36E-05	3.34E-07	4.77E-05
Acetone	0.00E+00	1.00E+00 (a,e)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichlorethene	1.42E-01	9.00E-03 (a,e)	6.22E-02	7.90E-05	6.18E-08	6.87E-06	2.16E-07	2.41E-05
1,2-Dichloroethene	1.00E-02	2.00E-01 (a,e)	4.38E-03	5.56E-06	4.36E-09	2.18E-08	1.52E-08	7.62E-08
Tetrachloroethene	2.79E-01	1.00E-01 (a,e)	1.22E-01	1.55E-04	1.22E-07	1.22E-06	4.25E-07	4.25E-06
Trichloroethene	1.53E-01	NA	6.70E-02	8.51E-05	6.66E-08	ERR	2.33E-07	ERR
Methylene Chloride	0.00E+00	9.00E-01 (c,g)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl Chloride	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	ERR	0.00E+00	ERR
1,1 Dichloroethane	6.00E-03	1.00E+00 (c,g)	2.63E-03	3.34E-06	2.61E-09	2.61E-09	9.15E-09	9.15E-09
Carbon Disulfide	0.00E+00	3.00E-03 (c,f,g)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Totals	8.09E-01					2.17E-05		7.61E-05

(a)Subchronic Oral RfD utilized where Subchronic Inhalation RfC not available. Subchronic values not available on IRIS.
(b)Inhalation value from IRIS.
(c)Inhalation value from HEAST, 4th Quarter, FY 1990.
(d)Oral value from IRIS.
(e)Oral value from HEAST, 4th Quarter, FY 1990.
(f)Subchronic value not available; chronic value utilized.
(g)Value not available on IRIS.

Source = Liquid Concentration * Flow Rate * Liters per gallon / seconds per minute
Air concentration = source * (X/Q)
Intake = (Air concentration * IR * ET * EF * ED) / (BW * AT)
Risk (for cancer) = Intake * Slope Factor
Risk (non-cancer) = Intake / RfC or RfD

Risk Calculation Worksheet

South Walnut Creek Basin
Surface Water Treatment
Influent Tank Rupture (10,000 gal)
Exposure of RFP Workers

Written: 08-Jan-91
Author: DCPalmer/KKerrigan
Printed: 08-Jan-91

Constants:

Liter Per Gal	3.7853	
Sec Per Min	60	
R	62.37	mmHg l/gmole K
N/V	3.28E+01	
kg/mg	1.00E-06	
gm/kg	1.00E+03	
gm/mg	1.00E-03	
m3/ml	1.00E-06	

Adult Body Weight	BWa	70	kg
Child Body Weight	BWc	15	kg
Adult Inhalation Rate	IRa	0.83	Cubic meters/hour
Worker Inhalation Rate	IRw	1.4	Cubic meters/hr
Child Inhalation Rate	IRc	0.625	Cubic meters/hour

Operationing Release Parameters

Exposure Time	ET	24	Hours/day
Exposure Frequency	EF	1	Days/year
Adult Exposure Duration	EDa	1	Years
Youth Exposure Duration	EDy	0	Years
Child Exposure Duration	EDc	1	Years
Averaging Time (carc.)	ATc	25550	Days
Adult Avg Time (non-carc.)	ATna	365	Days
Child Avg Time (non-carc.)	ATnc	365	Days
Worker Dispersion Factor	Chi over Q	2.83E-02	sec/cubic meter
	Job Duration	NA	Years
	Flow Rate	6.9	gpm

Carcinogenic:

	Liquid Conc (mg/l)	Slope Factor SF	Source (mg/sec)	Air Conc (mg/m3)	Intake (mg/kg/day)	Risk
Carbon Tetrachloride	2.19E-01	1.30E-01 (b)	9.59E-02	2.72E-03	3.04E-08	3.95E-09
Acetone	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichlorethene	1.42E-01	1.20E+00 (b)	6.22E-02	1.76E-03	1.97E-08	2.36E-08
1,2-Dichloroethene	1.00E-02	NA	4.38E-03	1.24E-04	1.39E-09	0.00E+00
Tetrachloroethene	2.79E-01	1.80E-03 (c,g)	1.22E-01	3.46E-03	3.87E-08	6.96E-11
Trichloroethene	1.53E-01	1.70E-02 (c,g)	6.70E-02	1.90E-03	2.12E-08	3.61E-10
Methylene Chloride	0.00E+00	1.40E-02 (b)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl Chloride	0.00E+00	1.90E+00 (e,g)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1 Dichloroethane	6.00E-03	NA	2.63E-03	7.44E-05	8.32E-10	0.00E+00
Carbon Disulfide	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Totals	8.09E-01					2.80E-08

Non-carcinogenic:

	Liquid Conc (mg/l)	RfC/RfD(a)	Source (mg/sec)	Air Conc (mg/m3)	Intake (mg/kg/day)	Risk
Carbon Tetrachloride	2.19E-01	7.00E-03 (a,e)	9.59E-02	2.72E-03	2.13E-06	3.04E-04
Acetone	0.00E+00	1.00E+00 (a,e)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichlorethene	1.42E-01	9.00E-03 (a,e)	6.22E-02	1.76E-03	1.38E-06	1.53E-04
1,2-Dichloroethene	1.00E-02	2.00E-01 (a,e)	4.38E-03	1.24E-04	9.71E-08	4.85E-07
Tetrachloroethene	2.79E-01	1.00E-01 (a,e)	1.22E-01	3.46E-03	2.71E-06	2.71E-05
Trichloroethene	1.53E-01	NA	6.70E-02	1.90E-03	1.48E-06	ERR
Methylene Chloride	0.00E+00	9.00E-01 (c,g)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl Chloride	0.00E+00	NA	0.00E+00	0.00E+00	0.00E+00	ERR
1,1 Dichloroethane	6.00E-03	1.00E+00 (c,g)	2.63E-03	7.44E-05	5.82E-08	5.82E-08
Carbon Disulfide	0.00E+00	3.00E-03 (c,f,g)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Totals	8.09E-01					4.84E-04

(a)Subchronic Oral RfD utilized where Subchronic Inhalation RfC not available. Subchronic values not available on IRIS.
(b)Inhalation value from IRIS.
(c)Inhalation value from HEAST, 4th Quarter, FY 1990.
(d)Oral value from IRIS.
(e)Oral value from HEAST, 4th Quarter, FY 1990.
(f)Subchronic value not available; chronic value utilized.
(g)Value not available on IRIS.

Source = Liquid Concentration * Flow Rate * Liters per gallon / seconds per minute
Air concentration = source * (X/Q)
Intake = (Air concentration * IR * ET * EF * ED) / (BW * AT)
Risk (for cancer) = Intake * Slope Factor
Risk (non-cancer) = Intake / RfC or RfD