Table A-3
Historical Groundwater Chemistry Data
Fairless Works
Well FUA03

Parameters	Units	Sampling Location			
		10/17/88	2/22/89	5/25/89	8/23/89
Groundwater Elevation	ft msl	1.82	2.25	4.33	2.75
Temperature	°C	16	13	15	15
pH	pH units	5.78	6.20	6.30	6.40
Specific Conductance @ 25°C	µmhos/cm	5120	3900	3000	2500
Total Organic Carbon	mg/l	11	13	20	17
Alkalinity	mg/l $CaCO_3$	<1	-(1)	164	208
Chloride	mg/l	1600	860	500	380
Nitrate	mg/l NO_3-N	0.4	-	<0.1	1.1
Sulfate	mg/l	450	-	740	540
Sulfide	mg/l	<0.1	<1	<0.1	<1
Fluoride	mg/l	0.04	0.15	0.15	0.24
Ammonia	mg/l	2.2	2.2	2.1	2.5
Nitrogen, Kjeldahl	mg/l	2.2	2.2	2.1	2
Calcium	mg/l	650	540	440	400
Magnesium	mg/l	120	74	61	56
Sodium	mg/l	76	100	110	110
Potassium	mg/l	9.6	12	8.1	8.7
Cyanide	mg/l	0.09	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	0.02	0.021	0.10	0.02
Metals:					
Aluminum	mg/l	<0.1	0.2	0.2	0.1
Antimony	mg/l	0.5	0.7	0.2	<0.1
Arsenic	mg/l	<0.001	0.004	0.003	0.004
Barium	mg/l	0.25	0.10	0.10	0.15
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	0.003	<0.001	<0.001	0.003
Chromium	mg/l	0.005	<0.001	<0.001	0.002
Cobalt	mg/l	0.4	0.2	<0.1	<0.1
Copper	mg/l	0.02	<0.01	<0.01	<0.01
Iron	mg/l	120	64	41	32
Lead	mg/l	0.001	<0.001	<0.001	<0.001
Manganese	mg/l	4.7	24	1.7	18
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	0.2	0.1	<0.1	0.2
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	0.003	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	0.007	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	1.6	0.89	0.11	0.10

See footnotes at end of table.

Table A-3
Well FUA03
(Continued)

Parameters	Units	Sampling Location			
		10/17/88	2/22/89	5/25/89	8/23/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	7	<5	27	52
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	<10	<10	-	-

See footnotes at end of table.

Table A-3
Well FUA03
(Continued)

Parameters	Units	Sampling Location 10/17/88	2/22/89	5/25/89	8/23/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	21	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	<10	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<10	-	-	-

See footnotes at end of table.

Table A-3
Well FUA03
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/22/90	8/14/90
Groundwater Elevation	ft msl	2.78	3.15	3.28	2.75
Temperature	°C	14	13	13	18
pH	pH units	6.55	6.50	6.40	6.25
Specific Conductance @ 25°C	µmhos/cm	2900	2500	2800	2500
Total Organic Carbon	mg/l	52	15	15	14
Alkalinity	mg/l $CaCO_3$	200	204	142	149
Chloride	mg/l	300	370	380	470
Nitrate	mg/l NO_3-N	0.2	0.1	0.4	<0.1
Sulfate	mg/l	530	500	600	560
Sulfide	mg/l	<1	<1	<1	<1
Fluoride	mg/l	0.21	0.28	0.21	0.23
Ammonia	mg/l	2.0	2.0	2.2	2.5
Nitrogen, Kjeldahl	mg/l	2.5	2.0	2.5	3.0
Calcium	mg/l	390	390	350	340
Magnesium	mg/l	52	53	46	43
Sodium	mg/l	100	110	88	92
Potassium	mg/l	4.5	9.5	4.0	4.7
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	0.01	<0.01	0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.1	<0.1
Antimony	mg/l	0.2	<0.1	0.2	0.1
Arsenic	mg/l	0.004	0.005	0.008	0.008
Barium	mg/l	0.12	0.04	0.04	0.04
Beryllium	mg/l	<0.01	0.01	<0.01	0.006
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.005	0.004	<0.001	0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	0.02
Copper	mg/l	0.01	0.01	<0.01	<0.01
Iron	mg/l	32	26	24	25
Lead	mg/l	0.001	<0.001	<0.001	<0.001
Manganese	mg/l	13	12	10	9.4
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.06	0.04	0.08	0.06

See footnotes at end of table.

Table A-3
Well FUA03
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/22/90	8/14/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	150	36	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	8
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table A-3
Well FUA03
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/22/90	8/14/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	94	-	-	18
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	28	-	-	14
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table A-3
Well FUA03
(Continued)

Parameters	Units	Sampling Location 11/14/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	2.09	2.61	3.04	2.02
Temperature	°C	15	15	14	16.6
pH	pH units	6.45	5.80	6.40	6.44
Specific Conductance @ 25°C	µmhos/cm	2200	1800	2100	3050
Total Organic Carbon	mg/l	13	23	13	15
Alkalinity	mg/l $CaCO_3$	152	210	155	165
Chloride	mg/l	430	350	360	390
Nitrate	mg/l NO_3-N	0.2	0.6	<0.1	<0.1
Sulfate	mg/l	560	480	490	640
Sulfide	mg/l	6	<1	<1	1.9
Fluoride	mg/l	0.27	0.22	0.17	0.19
Ammonia	mg/l	2.5	2.3	2.3	2.4
Nitrogen, Kjeldahl	mg/l	3.5	4.4	2	2.8
Calcium	mg/l	320	270	370	350
Magnesium	mg/l	42	39	51	40
Sodium	mg/l	96	90	110	83
Potassium	mg/l	6.7	6.6	7.0	7.5
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	<0.01	0.02	<0.01
Metals:					
Aluminum	mg/l	<0.1	0.5	0.3	0.2
Antimony	mg/l	<0.1	0.1	0.4	<0.1
Arsenic	mg/l	0.005	0.006	0.006	0.007
Barium	mg/l	0.04	0.03	0.04	0.04
Beryllium	mg/l	0.01	<0.01	0.01	0.008
Cadmium	mg/l	<0.001	0.001	<0.001	0.002
Chromium	mg/l	0.003	0.010	0.006	<0.001
Cobalt	mg/l	<0.01	<0.01	0.02	0.04
Copper	mg/l	0.02	<0.01	0.04	0.03
Iron	mg/l	25	28	44	39
Lead	mg/l	<0.001	0.010	0.001	<0.001
Manganese	mg/l	12	56	11	12
Mercury	mg/l	<0.0005	0.0016	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	0.002	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	0.04	0.02	0.04	0.04

See footnotes at end of table.

Table A-3
Well FUA03
(Continued)

Parameters	Units	Sampling Location			
		11/14/90	1/30/91	4/22/91	8/7/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table A-3
Well FUA03
(Continued)

Parameters	Units	Sampling Location 11/14/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table A-3
Well FUA03
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/20/92	4/22/92	7/22/92
Groundwater Elevation	ft msl	2.19	1.68	2.39	2.18
Temperature	°C	15.8	11.8	15.8	16.4
pH	pH units	6.06	6.20	6.19	6.09
Specific Conductance @ 25°C	µmhos/cm	2900	1900	2200	2300
Total Organic Carbon	mg/l	14	12	13	17
Alkalinity	mg/l $CaCO_3$	190	185	169	183
Chloride	mg/l	350	350	470	370
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.10
Sulfate	mg/l	420	450	460	610
Sulfide	mg/l	0.6	2.1	<1	<1.0
Fluoride	mg/l	0.22	0.21	0.19	0.16
Ammonia	mg/l	2.2	1.9	1.6	2.3
Nitrogen, Kjeldahl	mg/l	2.1	6	3	16
Calcium	mg/l	280	300	300	310
Magnesium	mg/l	41	40	41	42
Sodium	mg/l	87	83	78	82
Potassium	mg/l	6.7	6.7	6	4.7
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.010
Phenolics, Total	mg/l	0.01	0.02	<0.01	0.024
Metals:					
Aluminum	mg/l	0.2	<0.1	0.4	0.17
Antimony	mg/l	<0.1	0.2	<0.1	<0.10
Arsenic	mg/l	0.009	0.006	0.008	0.006
Barium	mg/l	0.04	0.03	0.04	0.030
Beryllium	mg/l	0.007	0.007	0.009	0.008
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.003	0.001	<0.001	0.002
Cobalt	mg/l	0.02	0.02	0.03	<0.010
Copper	mg/l	0.02	0.02	0.03	0.010
Iron	mg/l	25	30	30	20
Lead	mg/l	0.002	0.002	<0.001	<0.001
Manganese	mg/l	8.8	9.9	10	8.4
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	0.040
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	0.04	0.05	0.04	0.050

See footnotes at end of table.

Table A-3
Well FUA03
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/20/92	4/22/92	7/22/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table A-3
Well FUA03
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/20/92	4/22/92	7/22/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1) Dash denotes not analyzed.

Table A-4
Historical Groundwater Chemistry Data
Fairless Works
Well FUA04D

Parameters	Units	Sampling Location			
		10/17/88	2/24/89	5/25/89	8/23/89
Groundwater Elevation	ft msl	2.24	1.19	4.09	3.14
Temperature	°C	14	10	14	14
pH	pH units	6.15	7.35	6.70	7.05
Specific Conductance @ 25°C	µmhos/cm	260	280	260	250
Total Organic Carbon	mg/l	<1	1	1	<1
Alkalinity	mg/l $CaCO_3$	44	-(1)	44	40
Chloride	mg/l	32	3.3	32	35
Nitrate	mg/l NO_3-N	0.2	-	<0.1	<0.1
Sulfate	mg/l	27	-	20	25
Sulfide	mg/l	<0.1	<1	<0.1	<1
Fluoride	mg/l	0.07	0.15	0.14	0.16
Ammonia	mg/l	0.1	<0.1	<0.1	<0.1
Nitrogen, Kjeldahl	mg/l	0.1	0.2	<0.1	<1
Calcium	mg/l	21	23	17	23
Magnesium	mg/l	3.0	3.4	3	3
Sodium	mg/l	21	19	18	22
Potassium	mg/l	3.9	2.4	2.2	2.7
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	0.01	0.10	<0.01	0.04
Metals:					
Aluminum	mg/l	<0.1	0.2	0.1	0.2
Antimony	mg/l	<0.1	0.9	<0.1	<0.1
Arsenic	mg/l	<0.001	0.001	<0.001	<0.001
Barium	mg/l	0.18	0.09	0.12	0.14
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.002	<0.001	<0.001	0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.08	<0.01	<0.01	<0.01
Iron	mg/l	2.9	6.8	5.0	7.2
Lead	mg/l	0.001	<0.001	<0.001	<0.001
Manganese	mg/l	0.44	0.18	0.19	0.21
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.1
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	0.003	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.09	0.02	<0.01	<0.01

See footnotes at end of table.

Table A-4
Well FUA04D
(Continued)

Parameters	Units	Sampling Location			
		10/17/88	2/24/89	5/25/89	8/23/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	<10	<10	-	-

See footnotes at end of table.

Table A-4
Well FUA04D
(Continued)

Parameters	Units	Sampling Location 10/17/88	2/24/89	5/25/89	8/23/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	740	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	<10	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table A-4
Well FUA04D
(Continued)

Parameters	Units	Sampling Location			
		11/15/89	2/14/90	5/22/90	8/14/90
Groundwater Elevation	ft msl	3.21	3.27	3.47	3.07
Temperature	°C	14	13	12	15
pH	pH units	6.80	6.85	7.05	6.70
Specific Conductance @ 25°C	µmhos/cm	280	275	280	240
Total Organic Carbon	mg/l	8	1	1	<1
Alkalinity	mg/l $CaCO_3$	46	58	49	41
Chloride	mg/l	34	34	34	33
Nitrate	mg/l NO_3-N	<0.1	<0.1	0.1	<0.1
Sulfate	mg/l	23	25	21	18
Sulfide	mg/l	<1	2	<1	<1
Fluoride	mg/l	0.15	0.17	0.16	0.15
Ammonia	mg/l	<0.1	<0.1	<0.1	0.2
Nitrogen, Kjeldahl	mg/l	0.3	<0.1	0.7	1.2
Calcium	mg/l	18	18	16	15
Magnesium	mg/l	3	3	2	3
Sodium	mg/l	19	19	19	20
Potassium	mg/l	2.0	3.1	0.9	2.7
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	<0.01
Metals:					
Aluminum	mg/l	1.5	<0.1	<0.1	<0.1
Antimony	mg/l	0.2	<0.1	<0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	0.001	0.002
Barium	mg/l	0.10	0.10	0.10	0.09
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.001	<0.001	<0.001	0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	0.03	<0.01	<0.01	<0.01
Iron	mg/l	7.9	6.6	6.6	6.9
Lead	mg/l	0.001	<0.001	<0.0001	0.020
Manganese	mg/l	0.10	0.26	0.16	0.15
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	0.001
Thallium	mg/l	<0.001	<0.001	<0.001	0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.04	0.02	<0.01	0.01

See footnotes at end of table.

Table A-4
Well FUA04D
(Continued)

Parameters	Units	Sampling Location			
		11/15/89	2/14/90	5/22/90	8/14/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	7	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table A-4
Well FUA04D
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/22/90	8/14/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	66	-	-	<10
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	14	-	-	<10
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table A-4
Well FUA04D
(Continued)

Parameters	Units	Sampling Location 11/14/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	2.61	2.29	3.21	2.49
Temperature	°C	13	13	14	15.5
pH	pH units	6.95	6.30	6.00	6.81
Specific Conductance @ 25°C	µmhos/cm	240	200	250	330
Total Organic Carbon	mg/l	<1	10	<1	3
Alkalinity	mg/l $CaCO_3$	45	41	47	41
Chloride	mg/l	34	34	32	33
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.1
Sulfate	mg/l	20	19	19	24
Sulfide	mg/l	<1	<1	<1	<0.1
Fluoride	mg/l	0.17	0.14	0.11	0.14
Ammonia	mg/l	0.2	<0.1	<0.1	0.1
Nitrogen, Kjeldahl	mg/l	1.3	2.7	<1	0.1
Calcium	mg/l	16	17	21	19
Magnesium	mg/l	3	3	4	3
Sodium	mg/l	21	21	26	22
Potassium	mg/l	4.2	3.0	3.4	5.2
Cyanide	mg/l	<0.01	0.03	<0.01	0.01
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	0.5	0.2	0.1
Antimony	mg/l	<0.1	0.1	0.1	<0.1
Arsenic	mg/l	<0.001	0.001	<0.001	<0.001
Barium	mg/l	0.10	1.5	0.13	0.12
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	<0.001	0.008	0.004	<0.001
Cobalt	mg/l	<0.01	<0.01	<0.01	0.02
Copper	mg/l	<0.01	<0.01	<0.01	0.03
Iron	mg/l	6.8	7.0	9.1	8.1
Lead	mg/l	<0.001	<0.001	0.002	0.002
Manganese	mg/l	0.15	0.18	0.21	0.18
Mercury	mg/l	<0.0005	<0.0005	<0.0005	0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	0.002	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	<0.01	<0.01	0.01	<0.01

See footnotes at end of table.

Table A-4
Well FUA04D
(Continued)

Parameters	Units	Sampling Location			
		11/14/90	1/30/91	4/22/91	8/7/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table A-4
Well FUA04D
(Continued)

Parameters	Units	Sampling Location 11/14/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table A-4
Well FUA04D
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/20/92	4/22/92	7/22/92
Groundwater Elevation	ft msl	2.61	2.17	2.67	3.54
Temperature	°C	12.7	12.2	13.5	14.2
pH	pH units	6.39	6.52	6.74	6.39
Specific Conductance @ 25°C	µmhos/cm	350	240	260	270
Total Organic Carbon	mg/l	1	<1	<1	3.0
Alkalinity	mg/l $CaCO_3$	56	46	60	49.0
Chloride	mg/l	34	35	44	34
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.10
Sulfate	mg/l	24	22	15	12
Sulfide	mg/l	1.1	0.3	<1	<1.0
Fluoride	mg/l	0.11	0.12	0.12	0.14
Ammonia	mg/l	<0.1	<0.1	0.2	<0.10
Nitrogen, Kjeldahl	mg/l	<0.1	3	<1	2.0
Calcium	mg/l	17	17	16	16
Magnesium	mg/l	3	3	3	3.0
Sodium	mg/l	23	20	21	19
Potassium	mg/l	4.7	3.1	3	3.0
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.010
Phenolics, Total	mg/l	<0.01	0.02	0.02	0.026
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.3	<0.10
Antimony	mg/l	<0.1	<0.1	<0.1	<0.10
Arsenic	mg/l	0.001	0.001	<0.001	<0.001
Barium	mg/l	0.10	0.11	0.10	0.10
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.002	0.001	<0.001	<0.001
Cobalt	mg/l	<0.01	<0.01	0.02	0.010
Copper	mg/l	0.01	<0.01	<0.01	<0.010
Iron	mg/l	6.2	7.6	7	6.7
Lead	mg/l	<0.001	0.003	0.002	<0.001
Manganese	mg/l	0.16	0.16	0.2	0.16
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	<0.040
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	0.004	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	<0.01	0.02	0.01	<0.010

See footnotes at end of table.

Table A-4
Well FUA04D
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/20/92	4/22/92	7/22/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table A-4
Well FUA04D
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/20/92	4/22/92	7/22/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1) Dash denotes not analyzed.

Table A-5
Historical Groundwater Chemistry Data
Fairless Works
Well FUA05

Parameters	Units	Sampling Location			
		10/19/88	2/22/89	5/25/89	8/23/89
Groundwater Elevation	ft msl	0.93	2.19	4.20	2.63
Temperature	°C	11	12	14	14
pH	pH units	7.55	6.55	7.05	6.95
Specific Conductance @ 25°C	µmhos/cm	1600	1100	1400	1100
Total Organic Carbon	mg/l	11	7	12	12
Alkalinity	mg/l $CaCO_3$	192	-(1)	184	192
Chloride	mg/l	210	140	170	110
Nitrate	mg/l NO_3-N	0.2	-	<0.1	0.3
Sulfate	mg/l	310	-	270	290
Sulfide	mg/l	<0.1	<1	<0.1	<1
Fluoride	mg/l	0.06	0.12	0.05	0.12
Ammonia	mg/l	1.4	0.8	1.1	1.3
Nitrogen, Kjeldahl	mg/l	1.4	0.8	1.1	1
Calcium	mg/l	190	120	180	190
Magnesium	mg/l	23	17	21	22
Sodium	mg/l	69	51	55	55
Potassium	mg/l	5.9	3.7	4.0	14
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	0.03
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.1	0.2
Antimony	mg/l	<0.1	0.2	<0.1	0.2
Arsenic	mg/l	0.001	0.001	<0.001	<0.001
Barium	mg/l	0.09	0.06	0.07	0.10
Beryllium	mg/l	0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	<0.001	<0.001	0.003	0.020
Chromium	mg/l	0.002	<0.001	<0.001	0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.01	<0.01	0.01	0.03
Iron	mg/l	<0.1	1.6	1.2	2.3
Lead	mg/l	<0.001	<0.001	<0.001	<0.001
Manganese	mg/l	20	20	2.1	18
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.3
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	0.003	<0.001	<0.001	<0.001
Silver	mg/l	0.002	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	0.001	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.07	0.03	0.03	0.10

See footnotes at end of table.

Table A-5
Well FUA05
(Continued)

Parameters	Units	Sampling Location			
		10/19/88	2/22/89	5/25/89	8/23/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	40
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	10	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	23	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	39	<10	-	-

See footnotes at end of table.

Table A-5
Well FUA05
(Continued)

Parameters	Units	Sampling Location 10/19/88	2/22/89	5/25/89	8/23/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	11	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	130	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table A-5
Well FUA05
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/22/90	8/14/90
Groundwater Elevation	ft msl	2.68	3.10	3.31	2.73
Temperature	°C	14	12	12	17
pH	pH units	6.90	7.25	6.65	6.60
Specific Conductance @ 25°C	µmhos/cm	1100	1000	1100	800
Total Organic Carbon	mg/l	39	7	7	7
Alkalinity	mg/l $CaCO_3$	220	201	114	172
Chloride	mg/l	80	85	83	56
Nitrate	mg/l NO_3-N	<0.1	<0.1	0.1	<0.1
Sulfate	mg/l	210	230	250	220
Sulfide	mg/l	<1	<1	<1	<1
Fluoride	mg/l	0.14	0.10	0.14	0.15
Ammonia	mg/l	1.0	0.7	1.1	0.9
Nitrogen, Kjeldahl	mg/l	1.6	0.7	1.7	1.5
Calcium	mg/l	160	130	130	110
Magnesium	mg/l	17	16	16	15
Sodium	mg/l	39	39	34	31
Potassium	mg/l	3.3	4.9	2.7	4.2
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	<0.01
Metals:					
Aluminum	mg/l	4.9	0.1	<0.1	<0.1
Antimony	mg/l	0.2	<0.1	<0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	0.002	0.002
Barium	mg/l	0.06	0.03	0.04	0.03
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	0.001	<0.001	<0.001
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	0.08	0.02	<0.01	<0.01
Iron	mg/l	2.6	1.7	4.2	3.7
Lead	mg/l	0.002	<0.001	0.001	<0.001
Manganese	mg/l	0.56	16	13	11
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.06	0.03	<0.01	0.09

See footnotes at end of table.

Table A-5
Well FUA05
(Continued)

Parameters	Units	Sampling Location			
		11/15/89	2/14/90	5/22/90	8/14/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table A-5
Well FUA05
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/22/90	8/14/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	83	-	-	14
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	20	-	-	13
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table A-5
Well FUA05
(Continued)

Parameters	Units	Sampling Location 11/14/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	2.00	2.59	3.03	1.99
Temperature	°C	15	12	13	15.1
pH	pH units	6.65	8.70	6.30	6.61
Specific Conductance @ 25°C	µmhos/cm	600	950	800	1000
Total Organic Carbon	mg/l	5	13	7	10
Alkalinity	mg/l $CaCO_3$	162	181	167	171
Chloride	mg/l	41	51	65	40
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.1
Sulfate	mg/l	190	190	240	240
Sulfide	mg/l	<1	<1	10	1.5
Fluoride	mg/l	0.17	0.12	0.10	0.15
Ammonia	mg/l	1.2	1.2	1.3	1.3
Nitrogen, Kjeldahl	mg/l	1.7	7.7	<1	1.3
Calcium	mg/l	97	100	150	110
Magnesium	mg/l	14	14	20	15
Sodium	mg/l	27	30	39	25
Potassium	mg/l	5.8	5.1	5.5	5.7
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	<0.01
Metals:					
Aluminum	mg/l	0.5	0.5	0.2	0.2
Antimony	mg/l	<0.1	0.1	0.2	<0.1
Arsenic	mg/l	<0.001	0.002	0.002	<0.001
Barium	mg/l	0.03	0.04	0.03	0.04
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	<0.001	0.008	0.005	<0.001
Cobalt	mg/l	<0.01	<0.01	0.01	0.02
Copper	mg/l	<0.01	<0.01	0.01	0.02
Iron	mg/l	4.2	1.6	4.8	4.5
Lead	mg/l	<0.001	<0.001	<0.001	0.001
Manganese	mg/l	11	22	11	9.8
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	0.01	0.12	0.01	0.01

See footnotes at end of table.

Table A-5
Well FUA05
(Continued)

Parameters	Units	Sampling Location			
		11/14/90	1/30/91	4/22/91	8/7/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table A-5
Well FUA05
(Continued)

Parameters	Units	Sampling Location 11/14/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table A-5
Well FUA05
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/20/92	4/22/92	7/22/92
Groundwater Elevation	ft msl	2.35	1.69	2.46	2.19
Temperature	°C	13.8	10.7	14.4	13.8
pH	pH units	6.43	6.35	6.35	6.17
Specific Conductance @ 25°C	µmhos/cm	1000	725	800	800
Total Organic Carbon	mg/l	6	7	7	8.0
Alkalinity	mg/l $CaCO_3$	180	173	173	191
Chloride	mg/l	36	43	67	40
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.10
Sulfate	mg/l	180	190	180	180
Sulfide	mg/l	<0.1	<0.1	<1	<1.0
Fluoride	mg/l	0.13	0.12	0.11	0.13
Ammonia	mg/l	1.1	1.0	1.0	1.1
Nitrogen, Kjeldahl	mg/l	<0.1	3	2	8.0
Calcium	mg/l	98	100	100	100
Magnesium	mg/l	15	15	16	17
Sodium	mg/l	28	25	26	24
Potassium	mg/l	6.2	5.1	5	4.9
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.010
Phenolics, Total	mg/l	<0.01	0.02	0.01	0.12
Metals:					
Aluminum	mg/l	0.2	<0.1	0.4	<0.10
Antimony	mg/l	<0.1	<0.1	<0.1	<0.10
Arsenic	mg/l	0.001	0.002	0.002	0.001
Barium	mg/l	0.03	0.04	0.04	0.030
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.004	0.001	<0.001	<0.001
Cobalt	mg/l	<0.01	<0.01	0.02	0.010
Copper	mg/l	0.01	<0.01	0.01	0.010
Iron	mg/l	3.2	3.5	4	3.9
Lead	mg/l	<0.001	0.002	<0.001	0.002
Manganese	mg/l	9.6	9.8	10	9.0
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	0.050
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	0.01	0.05	0.02	<0.010

See footnotes at end of table.

Table A-5
Well FUA05
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/20/92	4/22/92	7/22/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table A-5
Well FUA05
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/20/92	4/22/92	7/22/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	2.7

(1) Dash denotes not analyzed.

Table A-6
Well FUA06D
(Continued)

Parameters	Units	Sampling Location					
		10/19/88	2/24/89	5/25/89	8/23/89	11/15/89	2/14/90
Volatiles:							
Acrolein	µg/l	<250	<250	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5	<5	<5
Acetone	µg/l	<10	<10	-	-	-	-

See footnotes at end of table.

Table A-6
Historical Groundwater Chemistry Data
Fairless Works
Well FUA06D

Parameters	Units	Sampling Location					
		10/19/88	2/24/89	5/25/89	8/23/89	11/15/89	2/14/90
Groundwater Elevation	ft msl	6.97	2.40	3.97	3.04	3.09	3.23
Temperature	°C	10	10	14	13	14	13
pH	pH units	10.00	7.65	11.45	10.85	11.45	11.75
Specific Conductance @ 25°C	µmhos/cm	375	240	800	600	1100	1150
Total Organic Carbon	mg/l	2	<1	2	1	9	2
Alkalinity	mg/l $CaCO_3$	128	-(1)	132	128	380	260
Chloride	mg/l	19	19	18	24	17	19
Nitrate	mg/l NO_3-N	<0.1	-	<0.1	<0.1	<0.1	<0.1
Sulfate	mg/l	23	-	14	49	19	21
Sulfide	mg/l	<0.1	2	<0.1	<1	<1	<1
Fluoride	mg/l	0.13	0.21	0.24	0.46	0.49	0.66
Ammonia	mg/l	0.3	<0.1	0.2	0.2	0.3	0.2
Nitrogen, Kjeldahl	mg/l	0.3	0.2	<0.1	<1	0.9	0.2
Calcium	mg/l	10	17	30	19	13	12
Magnesium	mg/l	1.2	2.6	2	<1	<1	2
Sodium	mg/l	46	18	24	54	61	25
Potassium	mg/l	64	2.6	12	64	94	13
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01	0.06	<0.01
Phenolics, Total	mg/l	0.05	<0.01	<0.01	0.10	0.17	0.14
Metals:							
Aluminum	mg/l	<0.1	<0.1	<0.1	0.2	<0.1	<0.1
Antimony	mg/l	0.2	0.7	<0.1	<0.1	<0.1	<0.1
Arsenic	mg/l	<0.001	0.001	<0.001	<0.001	0.001	<0.001
Barium	mg/l	0.04	0.08	0.08	0.07	0.10	0.05
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001	0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Iron	mg/l	<0.1	2.7	0.1	0.1	0.5	<0.1
Lead	mg/l	0.001	<0.001	<0.001	<0.001	0.001	<0.001
Manganese	mg/l	0.09	0.09	0.02	0.05	<0.01	0.06
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.2	<0.1	<0.1
Osmium	mg/l	<10	<0.1	<10	<20	<10	<1
Selenium	mg/l	0.003	<0.001	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1	<1	<1
Zinc	mg/l	0.02	0.02	<0.01	<0.01	0.02	0.02

See footnotes at end of table.

Table A-6
Well FUA06D
(Continued)

Parameters	Units	Sampling Location					
		10/19/88	2/24/89	5/25/89	8/23/89	11/15/89	2/14/90
Base/Neutrals:							
Acenaphthene	µg/l	<10	-	-	-	<10	-
Benzidine	µg/l	<50	-	-	-	<50	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-	<10	-
Hexachlorobenzene	µg/l	<10	-	-	-	<10	-
Hexachloroethane	µg/l	<10	-	-	-	<10	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-	<10	-
2-Chloronaphthalene	µg/l	<10	-	-	-	<10	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-	<10	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-	<10	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-	<10	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-	<10	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-	<10	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-	<10	-
Fluoranthene	µg/l	<10	-	-	-	<10	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-	<10	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-	<10	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-	<10	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-	<10	-
Hexachlorobutadiene	µg/l	<10	-	-	-	<10	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-	<10	-
Isophorone	µg/l	<10	-	-	-	<10	-
Naphthalene	µg/l	<10	-	-	-	<10	-
Nitrobenzene	µg/l	<10	-	-	-	<10	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-	<10	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-	<10	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-	<10	-
Bis(2-Ethylhexyl)phthalate	µg/l	11	-	-	-	48	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-	<10	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-	10	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-	<10	-
Diethyl Phthalate	µg/l	<10	-	-	-	<10	-
Dimethyl Phthalate	µg/l	<10	-	-	-	<10	-
Benzo(a)Anthracene	µg/l	<10	-	-	-	<10	-
Benzo(a)Pyrene	µg/l	<10	-	-	-	<10	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-	<10	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-	<10	-
Chrysene	µg/l	<10	-	-	-	<10	-
Acenaphthylene	µg/l	<10	-	-	-	<10	-
Anthracene	µg/l	<10	-	-	-	<10	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-	<50	-
Fluorene	µg/l	<10	-	-	-	<10	-
Phenanthrene	µg/l	<10	-	-	-	<10	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-	<50	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-	<50	-
Pyrene	µg/l	<10	-	-	-	<10	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-	-	-

See footnotes at end of table.

Table A-6
Well FUA06D
(Continued)

Parameters	Units	Sampling Location					
		5/22/90	8/14/90	11/14/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	3.09	2.86	2.44	NM(2)	NM	NM
Temperature	°C	12	15	12	12	14	14.6
pH	pH units	8.75	9.05	6.95	11.00	8.85	9.19
Specific Conductance @ 25°C	µmhos/cm	260	230	440	1000	245	300
Total Organic Carbon	mg/l	<1	<1	<1	1	<1	<1
Alkalinity	mg/l $CaCO_3$	76	122	72	331	94	80
Chloride	mg/l	18	19	20	19	19	20
Nitrate	mg/l NO_3-N	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sulfate	mg/l	30	25	17	16	14	25
Sulfide	mg/l	<1	<1	<1	<1	<1	2.3
Fluoride	mg/l	0.25	0.28	0.29	0.42	0.20	0.22
Ammonia	mg/l	<0.1	0.3	0.1	0.2	<0.1	0.2
Nitrogen, Kjeldahl	mg/l	0.8	0.4	0.6	2.7	<1	0.2
Calcium	mg/l	14	11	12	11	15	16
Magnesium	mg/l	2	2	2	2	2	2
Sodium	mg/l	24	25	23	28	31	26
Potassium	mg/l	13	14	11	18	19	15
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	0.02	<0.01	<0.01
Metals:							
Aluminum	mg/l	<0.1	0.3	<0.1	0.5	0.2	0.2
Antimony	mg/l	<0.1	<0.1	<0.1	0.1	<0.1	<0.1
Arsenic	mg/l	0.001	0.001	<0.001	0.002	<0.001	<0.001
Barium	mg/l	0.07	0.07	0.07	0.05	0.07	0.08
Beryllium	mg/l	<0.01	<0.005	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	<0.001	0.002	<0.001	0.006	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.01	<0.01	<0.01	<0.01	0.02
Copper	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	0.03
Iron	mg/l	<0.1	0.3	1.0	0.3	<0.1	<0.1
Lead	mg/l	<0.001	0.001	<0.001	<0.001	0.004	0.001
Manganese	mg/l	0.04	0.02	0.06	0.02	0.04	0.04
Mercury	mg/l	<0.0005	0.0006	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	0.001	0.001	0.001	0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	<0.01	0.01	<0.01	<0.01	<0.01	0.01

See footnotes at end of table.

Table A-6
Well FUA06D
(Continued)

Parameters	Units	Sampling Location					
		5/22/90	8/14/90	11/14/90	1/30/91	4/22/91	8/7/91
Volatiles:							
Acrolein	µg/l	<250	<250	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	7	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5	<5	<5
Chloroethane	µg/l	<5	<10	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5	<5	<5
Chloromethane	µg/l	<5	<10	<10	<10	<10	<10
Bromomethane	µg/l	<5	<10	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<10	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-	-	-

See footnotes at end of table.

Table A-6
Well FUA06D
(Continued)

Parameters	Units	Sampling Location					
		5/22/90	8/14/90	11/14/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:							
Acenaphthene	µg/l	-	<10	-	-	-	<10
Benzidine	µg/l	-	<50	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	<10	-	-	-	<10
Hexachlorobenzene	µg/l	-	<10	-	-	-	<10
Hexachloroethane	µg/l	-	<10	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	<10	-	-	-	<10
2-Chloronaphthalene	µg/l	-	<10	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	<10	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	<10	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	<10	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	<20	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	<10	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	<10	-	-	-	<10
Fluoranthene	µg/l	-	<10	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	<10	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	<10	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	<10	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	<10	-	-	-	<10
Hexachlorobutadiene	µg/l	-	<10	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	<10	-	-	-	<10
Isophorone	µg/l	-	<10	-	-	-	<10
Naphthalene	µg/l	-	<10	-	-	-	<10
Nitrobenzene	µg/l	-	<10	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	<10	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	<10	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	<10	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	110	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	<10	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	<10	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	<10	-	-	-	<10
Diethyl Phthalate	µg/l	-	<10	-	-	-	<10
Dimethyl Phthalate	µg/l	-	<10	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	<10	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	<10	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	<10	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	<10	-	-	-	<10
Chrysene	µg/l	-	<10	-	-	-	<10
Acenaphthylene	µg/l	-	<10	-	-	-	<10
Anthracene	µg/l	-	<10	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	<10	-	-	-	<50
Fluorene	µg/l	-	<10	-	-	-	<10
Phenanthrene	µg/l	-	<10	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	<10	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	<10	-	-	-	<50
Pyrene	µg/l	-	<10	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	<1	-	-	-	<1

See footnotes at end of table.

Table A-6
Well FUA06D
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/20/92	4/22/92	7/22/92
Groundwater Elevation	ft msl	2.97	NM	NM	NM
Temperature	°C	NS(3)	NS	NS	NS
pH	pH units	NS	NS	NS	NS
Specific Conductance @ 25°C	µmhos/cm	NS	NS	NS	NS
Total Organic Carbon	mg/l	NS	NS	NS	NS
Alkalinity	mg/l $CaCO_3$	NS	NS	NS	NS
Chloride	mg/l	NS	NS	NS	NS
Nitrate	mg/l NO_3-N	NS	NS	NS	NS
Sulfate	mg/l	NS	NS	NS	NS
Sulfide	mg/l	NS	NS	NS	NS
Fluoride	mg/l	NS	NS	NS	NS
Ammonia	mg/l	NS	NS	NS	NS
Nitrogen, Kjeldahl	mg/l	NS	NS	NS	NS
Calcium	mg/l	NS	NS	NS	NS
Magnesium	mg/l	NS	NS	NS	NS
Sodium	mg/l	NS	NS	NS	NS
Potassium	mg/l	NS	NS	NS	NS
Cyanide	mg/l	NS	NS	NS	NS
Phenolics, Total	mg/l	NS	NS	NS	NS
Metals:					
Aluminum	mg/l	NS	NS	NS	NS
Antimony	mg/l	NS	NS	NS	NS
Arsenic	mg/l	NS	NS	NS	NS
Barium	mg/l	NS	NS	NS	NS
Beryllium	mg/l	NS	NS	NS	NS
Cadmium	mg/l	NS	NS	NS	NS
Chromium	mg/l	NS	NS	NS	NS
Cobalt	mg/l	NS	NS	NS	NS
Copper	mg/l	NS	NS	NS	NS
Iron	mg/l	NS	NS	NS	NS
Lead	mg/l	NS	NS	NS	NS
Manganese	mg/l	NS	NS	NS	NS
Mercury	mg/l	NS	NS	NS	NS
Nickel	mg/l	NS	NS	NS	NS
Osmium	mg/l	NS	NS	NS	NS
Selenium	mg/l	NS	NS	NS	NS
Silver	mg/l	NS	NS	NS	NS
Thallium	mg/l	NS	NS	NS	NS
Tin	mg/l	NS	NS	NS	NS
Vanadium	mg/l	NS	NS	NS	NS
Zinc	mg/l	NS	NS	NS	NS

See footnotes at end of table.

Table A-6
Well FUA06D
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/20/92	4/22/92	7/22/92
Volatiles:					
Acrolein	µg/l	NS	NS	NS	NS
Acrylonitrile	µg/l	NS	NS	NS	NS
Benzene	µg/l	NS	NS	NS	NS
Carbon Tetrachloride	µg/l	NS	NS	NS	NS
Chlorobenzene	µg/l	NS	NS	NS	NS
1,2-Dichloroethane	µg/l	NS	NS	NS	NS
1,1,1-Trichloroethane	µg/l	NS	NS	NS	NS
1,1-Dichloroethane	µg/l	NS	NS	NS	NS
1,1,2-Trichloroethane	µg/l	NS	NS	NS	NS
1,1,2,2-Tetrachloroethane	µg/l	NS	NS	NS	NS
Chloroethane	µg/l	NS	NS	NS	NS
2-Chloroethylvinyl Ether	µg/l	NS	NS	NS	NS
Chloroform	µg/l	NS	NS	NS	NS
1,1-Dichloroethene	µg/l	NS	NS	NS	NS
Trans-1,2-Dichloroethene	µg/l	NS	NS	NS	NS
1,2-Dichloropropane	µg/l	NS	NS	NS	NS
1,3-Dichloropropene	µg/l	NS	NS	NS	NS
Ethylbenzene	µg/l	NS	NS	NS	NS
Methylene Chloride	µg/l	NS	NS	NS	NS
Chloromethane	µg/l	NS	NS	NS	NS
Bromomethane	µg/l	NS	NS	NS	NS
Bromoform	µg/l	NS	NS	NS	NS
Bromodichloromethane	µg/l	NS	NS	NS	NS
Dibromochloromethane	µg/l	NS	NS	NS	NS
Tetrachloroethene	µg/l	NS	NS	NS	NS
Toluene	µg/l	NS	NS	NS	NS
Trichloroethene	µg/l	NS	NS	NS	NS
Vinyl Chloride	µg/l	NS	NS	NS	NS
Acetone	µg/l	-	-	-	NS

See footnotes at end of table.

Table A-6
Well FUA06D
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/20/92	4/22/92	7/22/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	NS
Benzidine	µg/l	-	-	-	NS
1,2,4-Trichlorobenzene	µg/l	-	-	-	NS
Hexachlorobenzene	µg/l	-	-	-	NS
Hexachloroethane	µg/l	-	-	-	NS
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	NS
2-Chloronaphthalene	µg/l	-	-	-	NS
1,2-Dichlorobenzene	µg/l	-	-	-	NS
1,3-Dichlorobenzene	µg/l	-	-	-	NS
1,4-Dichlorobenzene	µg/l	-	-	-	NS
3,3-Dichlorobenzidine	µg/l	-	-	-	NS
2,4-Dinitrotoluene	µg/l	-	-	-	NS
2,6-Dinitrotoluene	µg/l	-	-	-	NS
Fluoranthene	µg/l	-	-	-	NS
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	NS
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	NS
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	NS
Bis(2-Chloroethyl)ether	µg/l	-	-	-	NS
Hexachlorobutadiene	µg/l	-	-	-	NS
Hexachlorocyclopentadiene	µg/l	-	-	-	NS
Isophorone	µg/l	-	-	-	NS
Naphthalene	µg/l	-	-	-	NS
Nitrobenzene	µg/l	-	-	-	NS
N-Nitrosodimethylamine	µg/l	-	-	-	NS
N-Nitrosodiphenylamine	µg/l	-	-	-	NS
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	NS
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	NS
Butyl Benzyl Phthalate	µg/l	-	-	-	NS
Di-n-Butyl Phthalate	µg/l	-	-	-	NS
Di-n-Octyl Phthalate	µg/l	-	-	-	NS
Diethyl Phthalate	µg/l	-	-	-	NS
Dimethyl Phthalate	µg/l	-	-	-	NS
Benzo(a)Anthracene	µg/l	-	-	-	NS
Benzo(a)Pyrene	µg/l	-	-	-	NS
Benzo(b)Fluoranthene	µg/l	-	-	-	NS
Benzo(k)Fluoranthene	µg/l	-	-	-	NS
Chrysene	µg/l	-	-	-	NS
Acenaphthylene	µg/l	-	-	-	NS
Anthracene	µg/l	-	-	-	NS
Benzo(g,h,i)Perylene	µg/l	-	-	-	NS
Fluorene	µg/l	-	-	-	NS
Phenanthrene	µg/l	-	-	-	NS
Dibenzo(ah)Anthracene	µg/l	-	-	-	NS
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	NS
Pyrene	µg/l	-	-	-	NS
Polychlorinated Biphenyls	µg/l	-	-	-	NS

(1) Dash denotes not analyzed.
(2) NM = Not measured due to well casing blockage.
(3) NS = Not sampled due to well casing blockage.

Appendix B

Historical Groundwater Chemistry Data
Area B Wells

Table B-1
Historical Groundwater Chemistry Data
Fairless Works
Well FUB01

Parameters	Units	Sampling Location			
		10/20/88	2/22/89	5/25/89	8/23/89
Groundwater Elevation	ft msl	5.67	7.38	9.64	8.32
Temperature	°C	14	11	15	18
pH	pH units	6.90	7.85	7.30	7.05
Specific Conductance @ 25°C	µmhos/cm	1550	1500	1500	1250
Total Organic Carbon	mg/l	<1	6	5	7
Alkalinity	mg/l $CaCO_3$	220	-(1)	224	208
Chloride	mg/l	54	60	31	35
Nitrate	mg/l NO_3-N	0.2	-	<0.1	0.3
Sulfate	mg/l	480	-	530	480
Sulfide	mg/l	<0.1	<1	<0.1	<1
Fluoride	mg/l	0.33	0.65	0.42	0.61
Ammonia	mg/l	17	19	14	15
Nitrogen, Kjeldahl	mg/l	17	19	14	27
Calcium	mg/l	180	160	210	210
Magnesium	mg/l	43	43	59	53
Sodium	mg/l	88	68	22	22
Potassium	mg/l	13	13	9.8	13
Cyanide	mg/l	<0.01	<0.01	<0.01	0.33
Phenolics, Total	mg/l	0.02	0.03	<0.01	0.02
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.2	0.2
Antimony	mg/l	<0.1	0.1	<0.1	<0.1
Arsenic	mg/l	0.004	0.005	0.008	0.010
Barium	mg/l	0.08	0.11	0.13	0.16
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	<0.001	<0.001	0.003	0.001
Chromium	mg/l	0.002	<0.001	<0.001	0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.01	<0.01	0.01	<0.01
Iron	mg/l	0.3	<0.1	2.1	2.6
Lead	mg/l	<0.001	<0.001	<0.001	<0.001
Manganese	mg/l	2.0	1.9	0.69	3.1
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.2
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	0.003	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	0.002	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.03	0.03	0.02	<0.01

See footnotes at end of table.

Table B-1
Well FUB01
(Continued)

Parameters	Units	Sampling Location			
		10/20/88	2/22/89	5/25/89	8/23/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	11	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	9	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	50000	90	-	-

See footnotes at end of table.

Table B-1
Well FUB01
(Continued)

Parameters	Units	Sampling Location 10/20/88	2/22/89	5/25/89	8/23/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	16	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	<10	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table B-1
Well FUB01
(Continued)

Parameters	Units	Sampling Location			
		11/16/89	2/14/90	5/23/90	8/15/90
Groundwater Elevation	ft msl	8.08	8.12	8.17	7.75
Temperature	°C	13	12	12	17
pH	pH units	7.60	6.90	7.60	7.45
Specific Conductance @ 25°C	µmhos/cm	1400	1200	1200	1200
Total Organic Carbon	mg/l	40	5	6	5
Alkalinity	mg/l $CaCO_3$	300	289	222	267
Chloride	mg/l	29	29	27	38
Nitrate	mg/l NO_3-N	0.1	<0.1	0.2	<0.1
Sulfate	mg/l	440	270	380	410
Sulfide	mg/l	<1	2	<1	2
Fluoride	mg/l	0.65	0.54	0.54	0.59
Ammonia	mg/l	17	16	14	19
Nitrogen, Kjeldahl	mg/l	19	16	15	19
Calcium	mg/l	210	150	140	140
Magnesium	mg/l	44	39	39	39
Sodium	mg/l	16	19	15	23
Potassium	mg/l	9.5	13	14	13
Cyanide	mg/l	0.04	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	0.02	<0.01	<0.01
Metals:					
Aluminum	mg/l	0.2	<0.1	<0.1	<0.1
Antimony	mg/l	<0.1	<0.1	0.2	0.1
Arsenic	mg/l	0.001	0.009	0.010	0.010
Barium	mg/l	0.13	0.07	0.07	0.07
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	<0.01	0.01	<0.01	<0.01
Iron	mg/l	2.4	2.3	2.4	1.9
Lead	mg/l	<0.001	0.23	<0.001	<0.001
Manganese	mg/l	2.6	2.5	2.3	2.3
Mercury	mg/l	<0.0005	<0.0005	<0.0005	0.0006
Nickel	mg/l	0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.03	0.02	<0.01	<0.01

See footnotes at end of table.

Table B-1
Well FUB01
(Continued)

Parameters	Units	Sampling Location			
		11/16/89	2/14/90	5/23/90	8/15/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	160	12	<5	12
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-1
Well FUB01
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/15/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	22	-	-	<10
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	10	-	-	<10
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-1
Well FUB01
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/6/91
Groundwater Elevation	ft msl	6.77	7.9	7.26	6.66
Temperature	°C	15	10	14	17.3
pH	pH units	6.85	6.10	6.50	7.48
Specific Conductance @ 25°C	µmhos/cm	1200	1100	1250	1500
Total Organic Carbon	mg/l	5	5	4	5
Alkalinity	mg/l $CaCO_3$	247	243	211	247
Chloride	mg/l	33	24	35	32
Nitrate	mg/l NO_3-N	0.1	<0.1	<0.1	<0.1
Sulfate	mg/l	430	400	470	400
Sulfide	mg/l	<1	<1	5	2.3
Fluoride	mg/l	0.67	0.43	0.32	0.41
Ammonia	mg/l	21	17	20	20
Nitrogen, Kjeldahl	mg/l	18	16	22	20
Calcium	mg/l	150	160	190	160
Magnesium	mg/l	42	43	55	39
Sodium	mg/l	25	17	26	19
Potassium	mg/l	17	16	19	15
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	0.01	0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	0.5	0.2	0.2
Antimony	mg/l	<0.1	0.1	0.3	<0.1
Arsenic	mg/l	0.009	0.012	0.008	0.009
Barium	mg/l	0.09	0.08	0.10	0.08
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	<0.001	0.007	0.005	0.002
Cobalt	mg/l	<0.01	<0.01	<0.01	0.02
Copper	mg/l	0.01	<0.01	0.02	0.03
Iron	mg/l	2.8	2.6	4.8	3.1
Lead	mg/l	<0.001	<0.001	0.001	0.002
Manganese	mg/l	2.5	2.6	3.4	2.6
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	0.002	<0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	<0.01	<0.01	0.02	0.01

See footnotes at end of table.

Table B-1
Well FUB01
(Continued)

Parameters	Units	Sampling Location			
		11/15/90	1/30/91	4/22/91	8/6/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	7	8	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-1
Well FUB01
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/6/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-1
Well FUB01
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/23/92	4/21/92	7/23/92
Groundwater Elevation	ft msl	6.48	6.46	6.42	6.88
Temperature	°C	16.7	12.7	14.8	15.3
pH	pH units	7.41	6.61	7.01	7.15
Specific Conductance @ 25°C	µmhos/cm	1550	1100	1100	1000
Total Organic Carbon	mg/l	4	4	8	5.0
Alkalinity	mg/l $CaCO_3$	280	239	157	255
Chloride	mg/l	29	24	37	28
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.10
Sulfate	mg/l	330	290	320	290
Sulfide	mg/l	1.7	7.6	<1	1.4
Fluoride	mg/l	0.37	0.52	0.38	0.43
Ammonia	mg/l	18	27	18	16
Nitrogen, Kjeldahl	mg/l	14	24	18	110
Calcium	mg/l	140	120	120	130
Magnesium	mg/l	39	36	36	39
Sodium	mg/l	19	17	17	16
Potassium	mg/l	16	13	13	15
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.010
Phenolics, Total	mg/l	<0.01	0.08	0.01	0.27
Metals:					
Aluminum	mg/l	0.2	<0.1	0.3	<0.10
Antimony	mg/l	<0.1	<0.1	<0.1	<0.10
Arsenic	mg/l	0.012	0.010	0.009	0.007
Barium	mg/l	0.08	0.06	0.07	0.060
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.002	0.002	<0.001	<0.001
Cobalt	mg/l	0.01	<0.01	0.02	<0.010
Copper	mg/l	0.02	0.01	0.02	<0.010
Iron	mg/l	2.7	0.5	2	2.3
Lead	mg/l	0.006	0.002	<0.001	<0.001
Manganese	mg/l	2.4	1.3	2	2.2
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	<0.10
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	<0.01	0.02	0.01	<0.010

See footnotes at end of table.

Table B-1
Well FUB01
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/23/92	4/21/92	7/23/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	6	<5	7	7
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	7
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-1
Well FUB01
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/23/92	4/21/92	7/23/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1) Dash denotes not analyzed.

Table B-2
Historical Groundwater Chemistry Data
Fairless Works
Well FUB02

Parameters	Units	Sampling Location			
		10/20/88	2/22/89	5/24/89	8/24/89
Groundwater Elevation	ft msl	6.36	7.09	9.14	7.79
Temperature	°C	13	11	14	15
pH	pH units	6.85	6.85	5.35	6.80
Specific Conductance @ 25°C	µmhos/cm	400	450	650	500
Total Organic Carbon	mg/l	9	3	2	1
Alkalinity	mg/l $CaCO_3$	88	-(1)	80	76
Chloride	mg/l	10	9.7	10	12
Nitrate	mg/l NO_3-N	0.7	-	1.0	1.0
Sulfate	mg/l	75	-	150	220
Sulfide	mg/l	<0.1	<1	<0.1	<1
Fluoride	mg/l	0.05	0.07	0.03	0.06
Ammonia	mg/l	<0.1	<0.1	<0.1	<0.1
Nitrogen, Kjeldahl	mg/l	<0.1	0.2	<0.1	<1
Calcium	mg/l	46	48	60	92
Magnesium	mg/l	11	12	17	25
Sodium	mg/l	9	8	8	9
Potassium	mg/l	6.6	3.6	3.8	5.5
Cyanide	mg/l	<0.01	<0.01	<0.01	0.33
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.2	0.2
Antimony	mg/l	0.2	0.2	<0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.02	0.03	0.04	0.04
Beryllium	mg/l	<0.01	0.01	<0.01	<0.01
Cadmium	mg/l	<0.001	0.002	0.001	0.002
Chromium	mg/l	0.002	<0.001	<0.001	0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.01	<0.01	0.01	0.01
Iron	mg/l	<0.1	<0.1	0.1	0.1
Lead	mg/l	0.001	<0.001	<0.001	<0.001
Manganese	mg/l	0.02	0.03	0.02	0.06
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.1
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	0.003	<0.001	0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	0.002	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.02	0.03	0.12	<0.01

See footnotes at end of table.

Table B-2
Well FUB02
(Continued)

Parameters	Units	Sampling Location			
		10/20/88	2/22/89	5/24/89	8/24/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	17
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	6	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	5	<5	6
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	21	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	36	870	-	-

See footnotes at end of table.

Table B-2
Well FUB02
(Continued)

Parameters	Units	Sampling Location 10/20/88	2/22/89	5/24/89	8/24/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	<10	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	<10	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table B-2
Well FUB02
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/15/90
Groundwater Elevation	ft msl	7.79	7.73	7.79	7.37
Temperature	°C	15	13	13	16
pH	pH units	6.65	6.35	6.85	6.30
Specific Conductance @ 25°C	µmhos/cm	750	800	900	800
Total Organic Carbon	mg/l	19	2	4	2
Alkalinity	mg/l $CaCO_3$	110	75	87	72
Chloride	mg/l	11	9.9	9.9	9.2
Nitrate	mg/l NO_3-N	1.2	1.2	1.1	1.0
Sulfate	mg/l	240	350	400	410
Sulfide	mg/l	<1	<1	<1	<1
Fluoride	mg/l	0.05	0.07	0.07	0.07
Ammonia	mg/l	<0.1	<0.1	<0.1	0.2
Nitrogen, Kjeldahl	mg/l	<0.1	<0.1	0.8	0.2
Calcium	mg/l	100	110	110	110
Magnesium	mg/l	26	33	35	35
Sodium	mg/l	9	9	8	8
Potassium	mg/l	4.0	5.3	2.8	4.0
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	0.07	0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	<0.1	<0.1	<0.1
Antimony	mg/l	<0.1	<0.1	0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.04	0.02	0.02	0.02
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	0.001	0.001	<0.001
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	<0.01	0.01	<0.01	<0.01
Iron	mg/l	0.7	<0.1	<0.1	<0.1
Lead	mg/l	<0.001	<0.001	<0.001	<0.001
Manganese	mg/l	<0.01	0.01	<0.01	<0.01
Mercury	mg/l	<0.0005	<0.0005	<0.0005	0.0009
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	0.001	<0.001	0.004	0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.03	0.02	<0.01	<0.01

See footnotes at end of table.

Table B-2
Well FUB02
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/15/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	10	<5	16	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-2
Well FUB02
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/15/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	43	-	-	26
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	9	-	-	<10
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-2
Well FUB02
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	6.46	7.52	7.03	6.28
Temperature	°C	13	17	13	16.4
pH	pH units	8.05	7.25	7.60	6.45
Specific Conductance @ 25°C	µmhos/cm	800	780	750	1000
Total Organic Carbon	mg/l	2	2	1	2
Alkalinity	mg/l $CaCO_3$	84	70	63	82
Chloride	mg/l	10	9.3	10	12
Nitrate	mg/l NO_3-N	1.2	1.1	1.1	1.2
Sulfate	mg/l	390	340	370	360
Sulfide	mg/l	<1	<1	<1	2.7
Fluoride	mg/l	0.07	0.08	0.57	0.09
Ammonia	mg/l	<0.1	<0.1	<0.1	0.1
Nitrogen, Kjeldahl	mg/l	0.6	2.2	<1	0.1
Calcium	mg/l	110	100	130	120
Magnesium	mg/l	35	32	39	30
Sodium	mg/l	9	8	8	7
Potassium	mg/l	5.3	4.1	4.2	3.7
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	0.05	<0.01	0.02
Metals:					
Aluminum	mg/l	<0.1	0.5	0.2	0.2
Antimony	mg/l	<0.1	0.1	0.2	<0.1
Arsenic	mg/l	<0.001	0.001	<0.001	<0.001
Barium	mg/l	0.02	<0.01	0.01	0.02
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	0.002
Chromium	mg/l	0.001	0.007	0.004	0.004
Cobalt	mg/l	<0.01	<0.01	<0.01	0.02
Copper	mg/l	<0.01	<0.01	0.01	0.03
Iron	mg/l	<0.1	<0.1	<0.1	0.3
Lead	mg/l	<0.001	<0.001	0.002	0.002
Manganese	mg/l	0.03	<0.01	<0.01	0.04
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	0.002	0.002	0.002	0.002
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	0.002	0.002	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	<0.01	<0.01	<0.01	0.02

See footnotes at end of table.

Table B-2
Well FUB02
(Continued)

Parameters	Units	Sampling Location			
		11/15/90	1/30/91	4/22/91	8/7/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	9	8	<5	15
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	56
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-2
Well FUB02
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-2
Well FUB02
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/21/92	7/23/92
Groundwater Elevation	ft msl	6.15	6.08	6.10	6.50
Temperature	°C	14.7	12.4	15.4	14.7
pH	pH units	6.45	6.13	6.62	6.19
Specific Conductance @ 25°C	µmhos/cm	900	600	600	600
Total Organic Carbon	mg/l	1	1	1	2.0
Alkalinity	mg/l $CaCO_3$	97	95	92	99.0
Chloride	mg/l	10	10	14	12
Nitrate	mg/l NO_3-N	1.1	0.9	1.0	1.3
Sulfate	mg/l	290	260	180	200
Sulfide	mg/l	<0.1	0.9	<1	<1.0
Fluoride	mg/l	0.08	0.10	0.07	0.060
Ammonia	mg/l	<0.1	<0.1	<0.1	<0.10
Nitrogen, Kjeldahl	mg/l	<0.1	3	1	2.0
Calcium	mg/l	99	91	78	79
Magnesium	mg/l	31	27	24	24
Sodium	mg/l	10	7	6	7.0
Potassium	mg/l	5.3	3.7	4	3.4
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.010
Phenolics, Total	mg/l	<0.01	0.03	0.04	0.091
Metals:					
Aluminum	mg/l	0.1	<0.1	0.2	<0.10
Antimony	mg/l	<0.1	<0.1	<0.1	<0.10
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.02	0.01	0.02	0.010
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.001	0.001	<0.001	<0.001
Cobalt	mg/l	<0.01	<0.01	<0.01	<0.010
Copper	mg/l	0.01	0.02	0.01	<0.010
Iron	mg/l	<0.1	<0.1	<0.1	<0.10
Lead	mg/l	0.001	0.003	<0.001	0.001
Manganese	mg/l	<0.01	0.12	0.01	<0.010
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	<0.040
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	0.001	0.002	0.001	0.002
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	<0.01	0.02	0.01	<0.010

See footnotes at end of table.

Table B-2
Well FUB02
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/21/92	7/23/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-2
Well FUB02
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/22/92	4/21/92	7/23/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1) Dash denotes not analyzed.

Table B-3
Historical Groundwater Chemistry Data
Fairless Works
Well FUB03

Parameters	Units	Sampling Location			
		10/20/88	2/24/89	5/25/89	8/24/89
Groundwater Elevation	ft msl	6.74	9.14	9.16	8.07
Temperature	°C	13	8	12	18
pH	pH units	5.95	7.45	6.25	7.70
Specific Conductance @ 25°C	µmhos/cm	290	290	260	200
Total Organic Carbon	mg/l	1	3	3	3
Alkalinity	mg/l $CaCO_3$	76	-(1)	60	60
Chloride	mg/l	9.2	7.2	8.6	8.7
Nitrate	mg/l NO_3-N	0.3	-	<0.1	<0.1
Sulfate	mg/l	41	-	64	39
Sulfide	mg/l	<0.1	<1	<0.1	<1
Fluoride	mg/l	0.05	0.08	0.05	0.12
Ammonia	mg/l	0.2	<0.1	<0.1	<0.1
Nitrogen, Kjeldahl	mg/l	1.3	0.3	<0.1	<1
Calcium	mg/l	28	26	24	30
Magnesium	mg/l	9.6	7.7	9	9
Sodium	mg/l	9	6	6	7
Potassium	mg/l	4.7	3.1	3.4	3.8
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.1	0.1
Antimony	mg/l	<0.1	<0.1	<0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.07	0.03	0.04	0.04
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	<0.001	<0.001	0.012	<0.001
Chromium	mg/l	0.003	<0.001	<0.001	0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.01	<0.01	<0.01	<0.01
Iron	mg/l	<0.1	<0.1	0.2	0.1
Lead	mg/l	0.001	<0.001	0.003	<0.001
Manganese	mg/l	3.7	3.1	0.58	2.6
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.1
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	0.003	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	0.002	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.05	0.02	0.04	<0.01

See footnotes at end of table.

Table B-3
Well FUB03
(Continued)

Parameters	Units	Sampling Location			
		10/20/88	2/24/89	5/25/89	8/24/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	<10	<10	-	-

See footnotes at end of table.

Table B-3
Well FUB03
(Continued)

Parameters	Units	Sampling Location 10/20/88	2/24/89	5/25/89	8/24/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	12	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	<10	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table B-3
Well FUB03
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/15/90
Groundwater Elevation	ft msl	8.49	9.12	9.01	9.09
Temperature	°C	11	13	11	16
pH	pH units	7.05	6.30	6.75	6.00
Specific Conductance @ 25°C	µmhos/cm	280	380	480	450
Total Organic Carbon	mg/l	21	3	3	3
Alkalinity	mg/l $CaCO_3$	72	80	69	53
Chloride	mg/l	7.4	7.2	6.8	6.4
Nitrate	mg/l NO_3-N	<0.1	<0.1	0.1	<0.1
Sulfate	mg/l	44	100	150	170
Sulfide	mg/l	<1	<1	<1	<1
Fluoride	mg/l	0.14	0.11	0.13	0.13
Ammonia	mg/l	<0.1	<0.1	<0.1	0.2
Nitrogen, Kjeldahl	mg/l	0.4	<0.1	1.1	0.8
Calcium	mg/l	26	40	46	52
Magnesium	mg/l	8	11	13	6
Sodium	mg/l	6	6	6	15
Potassium	mg/l	3.3	5.4	4.4	6.1
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	0.09	<0.01	<0.01
Metals:					
Aluminum	mg/l	0.2	<0.1	<0.1	<0.1
Antimony	mg/l	<0.1	<0.1	<0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.05	0.06	0.08	0.09
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	0.001	<0.001	<0.001
Chromium	mg/l	0.005	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	0.01	<0.01	<0.01	<0.01
Iron	mg/l	0.7	<0.1	<0.1	<0.1
Lead	mg/l	<0.001	<0.001	0.001	0.001
Manganese	mg/l	2.6	3.3	4.3	5.2
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.03	0.02	0.01	<0.01

See footnotes at end of table.

Table B-3
Well FUB03
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/15/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	9	10	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-3
Well FUB03
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/15/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	50	-	-	11
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	15	-	-	<10
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-3
Well FUB03
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	8.53	6.15	9.32	8.15
Temperature	°C	13	10	12	15.2
pH	pH units	7.75	6.75	6.60	6.19
Specific Conductance @ 25°C	µmhos/cm	800	425	550	600
Total Organic Carbon	mg/l	2	3	2	2
Alkalinity	mg/l $CaCO_3$	51	46	39	45
Chloride	mg/l	8.8	8.7	7.0	12
Nitrate	mg/l NO_3-N	0.2	<0.1	<0.1	0.4
Sulfate	mg/l	220	200	270	190
Sulfide	mg/l	<1	<1	<1	0.1
Fluoride	mg/l	0.12	0.11	0.78	0.11
Ammonia	mg/l	<0.1	<0.1	<0.1	<0.1
Nitrogen, Kjeldahl	mg/l	1.4	5.8	<1	<0.1
Calcium	mg/l	59	59	81	57
Magnesium	mg/l	18	18	25	16
Sodium	mg/l	6	6	7	8
Potassium	mg/l	7.8	5.6	6.7	6.9
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	0.5	0.2	0.1
Antimony	mg/l	<0.1	0.1	0.2	<0.1
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.09	0.08	0.10	0.07
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	0.006	<0.001	0.001
Chromium	mg/l	<0.001	0.007	0.002	<0.001
Cobalt	mg/l	<0.01	<0.01	0.01	0.02
Copper	mg/l	<0.01	<0.01	0.01	0.03
Iron	mg/l	<0.1	<0.1	0.3	0.1
Lead	mg/l	<0.001	<0.001	0.001	<0.001
Manganese	mg/l	6.2	4.4	7.3	5.0
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	<0.01	<0.01	0.01	0.01

See footnotes at end of table.

Table B-3
Well FUB03
(Continued)

Parameters	Units	Sampling Location			
		11/15/90	1/30/91	4/22/91	8/7/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-3
Well FUB03
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-3
Well FUB03
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/22/92	4/22/92	7/23/92
Groundwater Elevation	ft msl	8.78	8.52	8.06	7.82
Temperature	°C	15.1	11.2	12.4	15.2
pH	pH units	6.12	5.73	6.74	6.31
Specific Conductance @ 25°C	µmhos/cm	600	430	450	450
Total Organic Carbon	mg/l	2	2	2	2.0
Alkalinity	mg/l $CaCO_3$	47	52	51	65.0
Chloride	mg/l	12	13	18	14
Nitrate	mg/l NO_3-N	0.5	0.6	0.4	0.47
Sulfate	mg/l	140	140	130	130
Sulfide	mg/l	<0.1	<0.1	<1	<1.0
Fluoride	mg/l	0.10	0.10	0.07	0.090
Ammonia	mg/l	<0.1	<0.1	0.1	<0.10
Nitrogen, Kjeldahl	mg/l	<0.1	3	3	1.0
Calcium	mg/l	45	47	46	45
Magnesium	mg/l	15	15	15	15
Sodium	mg/l	10	7	10	7.0
Potassium	mg/l	7.4	4.6	6	4.2
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.010
Phenolics, Total	mg/l	<0.01	0.02	<0.01	0.067
Metals:					
Aluminum	mg/l	0.1	<0.1	0.5	<0.10
Antimony	mg/l	<0.1	<0.1	<0.1	<0.10
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.06	0.05	0.05	0.050
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	0.001	<0.001	0.003	0.001
Chromium	mg/l	0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.01	<0.01	<0.01	<0.010
Copper	mg/l	0.01	<0.01	0.02	<0.010
Iron	mg/l	<0.1	0.2	0.3	<0.10
Lead	mg/l	<0.001	0.006	0.002	0.002
Manganese	mg/l	3.7	3.3	3	2.7
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	<0.040
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	0.002
Tin	mg/l	<0.1	<0.1	<0.1	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	<0.01	0.02	0.02	<0.010

See footnotes at end of table.

Table B-3
Well FUB03
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/22/92	4/22/92	7/23/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-3
Well FUB03
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/22/92	4/22/92	7/23/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1) Dash denotes not analyzed.

Table B-4
Historical Groundwater Chemistry Data
Fairless Works
Well FUB04

Parameters	Units	Sampling Location			
		10/18/88	2/23/89	5/24/89	8/24/89
Groundwater Elevation	ft msl	6.19	6.88	8.87	7.55
Temperature	°C	-(1)	8	13	17
pH	pH units	6.55	7.05	6.45	6.75
Specific Conductance @ 25°C	µmhos/cm	650	600	750	500
Total Organic Carbon	mg/l	2	2	4	4
Alkalinity	mg/l $CaCO_3$	56	-	16	52
Chloride	mg/l	9.6	9.9	11	15
Nitrate	mg/l NO_3-N	0.3	-	<0.1	0.7
Sulfate	mg/l	240	-	240	300
Sulfide	mg/l	<0.1	<1	<0.1	<1
Fluoride	mg/l	0.05	0.08	0.04	0.07
Ammonia	mg/l	0.2	<0.1	<0.1	<0.1
Nitrogen, Kjeldahl	mg/l	0.2	0.2	<0.1	<1
Calcium	mg/l	91	85	96	130
Magnesium	mg/l	9.8	9.2	10	13
Sodium	mg/l	11	10	10	12
Potassium	mg/l	23	15	16	19
Cyanide	mg/l	<0.01	<0.01	0.01	<0.01
Phenolics, Total	mg/l	0.04	<0.01	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.2	0.2
Antimony	mg/l	0.4	<0.1	<0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.06	0.03	0.03	0.03
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	<0.001	<0.001	0.005	<0.001
Chromium	mg/l	0.002	<0.001	0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.01	<0.01	0.02	<0.01
Iron	mg/l	<0.1	0.1	0.3	0.1
Lead	mg/l	<0.001	<0.001	0.001	<0.001
Manganese	mg/l	1.4	0.42	0.30	0.58
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.05	0.03	0.03	<0.01

See footnotes at end of table.

Table B-4
Well FUB04
(Continued)

Parameters	Units	Sampling Location			
		10/18/88	2/23/89	5/24/89	8/24/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	7	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	<10	<10	-	-

See footnotes at end of table.

Table B-4
Well FUB04
(Continued)

Parameters	Units	Sampling Location 10/18/88	2/23/89	5/24/89	8/24/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	32	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	<10	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table B-4
Well FUB04
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/15/90
Groundwater Elevation	ft msl	7.47	7.47	7.51	7.11
Temperature	°C	15	12	12	18
pH	pH units	6.55	6.10	6.65	6.20
Specific Conductance @ 25°C	µmhos/cm	800	800	950	750
Total Organic Carbon	mg/l	14	2	2	3
Alkalinity	mg/l $CaCO_3$	65	53	53	51
Chloride	mg/l	19	32	34	28
Nitrate	mg/l NO_3-N	0.5	0.5	0.5	0.4
Sulfate	mg/l	270	320	370	360
Sulfide	mg/l	1	3	<1	<1
Fluoride	mg/l	0.07	0.09	0.07	0.09
Ammonia	mg/l	<0.1	<0.1	<0.1	0.2
Nitrogen, Kjeldahl	mg/l	0.2	<0.1	0.8	0.6
Calcium	mg/l	140	120	120	120
Magnesium	mg/l	13	13	14	14
Sodium	mg/l	11	12	13	12
Potassium	mg/l	14	19	23	21
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	0.08	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	<0.1	<0.1	<0.1
Antimony	mg/l	<0.1	<0.1	<0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.03	0.01	0.03	0.02
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	0.002	<0.001	<0.001	0.001
Chromium	mg/l	<0.001	<0.001	<0.001	0.033
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	<0.01	0.01	<0.01	<0.01
Iron	mg/l	<0.1	<0.1	<0.1	<0.1
Lead	mg/l	<0.001	<0.001	<0.001	<0.001
Manganese	mg/l	0.72	0.47	0.20	0.66
Mercury	mg/l	<0.0005	<0.0005	<0.0005	0.0006
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.03	0.02	0.01	<0.01

See footnotes at end of table.

Table B-4
Well FUB04
(Continued)

Parameters	Units	Sampling Location			
		11/16/89	2/14/90	5/23/90	8/15/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	12	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-4
Well FUB04
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/15/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	35	-	-	<10
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	<10	-	-	<10
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-4
Well FUB04
(Continued)

Parameters	Units	Sampling Location			
		11/15/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	6.25	7.21	6.68	6.10
Temperature	°C	13	17	13	19.5
pH	pH units	6.75	7.85	6.60	6.38
Specific Conductance @ 25°C	µmhos/cm	850	825	800	1000
Total Organic Carbon	mg/l	2	3	3	4
Alkalinity	mg/l $CaCO_3$	56	55	51	54
Chloride	mg/l	29	26	26	24
Nitrate	mg/l NO_3-N	0.7	0.4	0.5	0.6
Sulfate	mg/l	370	350	400	370
Sulfide	mg/l	<1	<1	<1	0.1
Fluoride	mg/l	0.11	0.09	0.07	0.11
Ammonia	mg/l	0.4	<0.1	<0.1	0.2
Nitrogen, Kjeldahl	mg/l	0.9	5.2	<1	4.4
Calcium	mg/l	120	130	130	120
Magnesium	mg/l	15	17	16	13
Sodium	mg/l	13	13	15	11
Potassium	mg/l	23	22	24	19
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	0.5	0.2	0.2
Antimony	mg/l	<0.1	0.1	0.2	<0.1
Arsenic	mg/l	<0.001	0.001	<0.001	<0.001
Barium	mg/l	0.02	<0.01	0.02	0.02
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	0.004	0.002
Chromium	mg/l	<0.001	<0.001	0.004	<0.001
Cobalt	mg/l	<0.01	<0.01	0.01	0.02
Copper	mg/l	<0.01	<0.01	0.03	0.02
Iron	mg/l	<0.1	<0.1	<0.1	<0.1
Lead	mg/l	<0.001	0.002	0.002	<0.001
Manganese	mg/l	0.68	0.70	0.28	0.28
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	0.001	<0.001	<0.001	0.002
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	<0.01	<0.01	0.03	0.03

See footnotes at end of table.

Table B-4
Well FUB04
(Continued)

Parameters	Units	Sampling Location			
		11/15/90	1/30/91	4/22/91	8/7/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-4
Well FUB04
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-4
Well FUB04
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/21/92	7/23/92
Groundwater Elevation	ft msl	5.90	5.81	5.84	6.21
Temperature	°C	13.0	11.8	15.3	14.5
pH	pH units	6.45	6.10	6.56	6.03
Specific Conductance @ 25°C	µmhos/cm	1000	720	700	700
Total Organic Carbon	mg/l	3	2	3	4.0
Alkalinity	mg/l $CaCO_3$	69	67	69	66.0
Chloride	mg/l	22	18	27	19
Nitrate	mg/l NO_3-N	0.5	0.6	0.6	0.71
Sulfate	mg/l	280	290	250	250
Sulfide	mg/l	0.3	0.2	<1	<1.0
Fluoride	mg/l	0.09	0.10	0.06	0.070
Ammonia	mg/l	<0.1	<0.1	0.2	<0.10
Nitrogen, Kjeldahl	mg/l	<0.1	4	<1	1.0
Calcium	mg/l	110	110	97	94
Magnesium	mg/l	14	15	14	15
Sodium	mg/l	16	12	12	11
Potassium	mg/l	25	18	17	17
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.010
Phenolics, Total	mg/l	<0.01	0.06	<0.01	0.12
Metals:					
Aluminum	mg/l	0.1	<0.1	0.2	<0.10
Antimony	mg/l	<0.1	<0.1	<0.1	<0.10
Arsenic	mg/l	0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.02	0.01	0.02	0.010
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	0.005	<0.001	0.002	0.001
Chromium	mg/l	<0.001	0.001	<0.001	<0.001
Cobalt	mg/l	<0.01	<0.01	0.01	<0.010
Copper	mg/l	0.01	0.01	0.03	<0.010
Iron	mg/l	<0.1	0.2	<0.1	<0.10
Lead	mg/l	<0.001	0.003	<0.001	0.001
Manganese	mg/l	0.26	0.45	0.3	0.40
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	<0.040
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	0.04	0.03	0.04	<0.010

See footnotes at end of table.

Table B-4
Well FUB04
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/21/92	7/23/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-4
Well FUB04
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/22/92	4/21/92	7/23/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	15
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1) Dash denotes not analyzed.

Table B-5
Historical Groundwater Chemistry Data
Fairless Works
Well FUB05D

Parameters	Units	Sampling Location			
		10/18/88	2/23/89	5/24/89	8/24/89
Groundwater Elevation	ft msl	7.07	8.62	9.57	8.87
Temperature	°C	14	8	13	16
pH	pH units	7.20	7.20	6.75	7.25
Specific Conductance @ 25°C	µmhos/cm	125	115	125	100
Total Organic Carbon	mg/l	2	2	2	2
Alkalinity	mg/l $CaCO_3$	40	(1)	40	40
Chloride	mg/l	4.0	3.9	3.4	15
Nitrate	mg/l NO_3-N	0.6	-	0.2	0.2
Sulfate	mg/l	35	-	16	36
Sulfide	mg/l	<0.1	<1	<0.1	<1
Fluoride	mg/l	0.04	0.06	0.03	0.05
Ammonia	mg/l	<0.1	<0.1	<0.1	<0.1
Nitrogen, Kjeldahl	mg/l	<0.1	0.2	<0.1	<1
Calcium	mg/l	12	15	11	13
Magnesium	mg/l	4.4	5.1	5	5
Sodium	mg/l	6	4	3	4
Potassium	mg/l	1.9	1.0	1.6	1.0
Cyanide	mg/l	0.23	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	0.15
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.2	0.2
Antimony	mg/l	<0.1	<0.1	<0.1	<0.1
Arsenic	mg/l	0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.16	0.02	0.28	<0.01
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.008	0.003	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.02	<0.01	<0.01	<0.01
Iron	mg/l	<0.1	0.1	0.3	0.3
Lead	mg/l	0.001	0.001	0.007	<0.001
Manganese	mg/l	0.04	0.08	0.10	0.10
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.1
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	0.002	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.06	0.03	0.04	<0.01

See footnotes at end of table.

Table B-5
Well FUB05D
(Continued)

Parameters	Units	Sampling Location			
		10/18/88	2/23/89	5/24/89	8/24/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	<10	<10	-	-

See footnotes at end of table.

Table B-5
Well FUB05D
(Continued)

Parameters	Units	Sampling Location 10/18/88	2/23/89	5/24/89	8/24/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	13	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	<10	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table B-5
Well FUB05D
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/15/90
Groundwater Elevation	ft msl	8.97	9.14	9.03	8.73
Temperature	°C	15	12	13	18
pH	pH units	6.95	6.55	7.05	6.45
Specific Conductance @ 25°C	µmhos/cm	140	100	120	110
Total Organic Carbon	mg/l	11	2	1	1
Alkalinity	mg/l $CaCO_3$	38	40	40	43
Chloride	mg/l	4.4	4.1	2.8	2.4
Nitrate	mg/l NO_3-N	0.6	0.6	0.4	0.4
Sulfate	mg/l	14	14	15	13
Sulfide	mg/l	<1	5	<1	<1
Fluoride	mg/l	0.02	0.06	0.03	0.05
Ammonia	mg/l	<0.1	<0.1	<0.1	0.2
Nitrogen, Kjeldahl	mg/l	<0.1	<0.1	0.9	0.3
Calcium	mg/l	10	11	11	10
Magnesium	mg/l	5	5	4	4
Sodium	mg/l	3	2	3	3
Potassium	mg/l	0.7	0.9	<0.1	0.6
Cyanide	mg/l	<0.01	0.04	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	0.07	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	<0.1	<0.1	<0.1
Antimony	mg/l	<0.1	<0.1	<0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	0.001	<0.001
Barium	mg/l	<0.01	<0.01	0.03	<0.01
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	<0.01	<0.01	<0.01	<0.01
Iron	mg/l	0.4	0.2	0.2	0.2
Lead	mg/l	<0.001	0.002	<0.001	<0.001
Manganese	mg/l	0.05	0.07	0.05	0.04
Mercury	mg/l	<0.0005	<0.0005	<0.0005	0.0010
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.04	0.02	0.02	0.10

See footnotes at end of table.

Table B-5
Well FUB05D
(Continued)

Parameters	Units	Sampling Location			
		11/16/89	2/14/90	5/23/90	8/15/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-5
Well FUB05D
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/15/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	51	-	-	<10
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	<10	-	-	<10
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-5
Well FUB05D
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	7.95	8.67	8.65	7.75
Temperature	°C	13	17	13	18.0
pH	pH units	8.00	8.15	6.70	6.61
Specific Conductance @ 25°C	µmhos/cm	110	100	115	150
Total Organic Carbon	mg/l	<1	10	<1	2
Alkalinity	mg/l $CaCO_3$	41	48	42	39
Chloride	mg/l	6.0	4.7	4.2	4.8
Nitrate	mg/l NO_3-N	0.8	3.8	1.2	0.8
Sulfate	mg/l	16	29	28	29
Sulfide	mg/l	<1	<1	<1	0.3
Fluoride	mg/l	0.04	0.05	0.10	0.07
Ammonia	mg/l	0.2	<0.1	<0.1	0.1
Nitrogen, Kjeldahl	mg/l	0.7	2.6	<1	0.1
Calcium	mg/l	10	11	13	12
Magnesium	mg/l	4	5	6	4
Sodium	mg/l	2	3	2	2
Potassium	mg/l	1.2	0.90	0.6	0.9
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	0.02	0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	0.5	0.2	0.1
Antimony	mg/l	<0.1	0.1	0.1	<0.1
Arsenic	mg/l	<0.001	0.002	<0.001	<0.001
Barium	mg/l	0.01	<0.01	0.01	0.01
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	0.004	0.002	<0.001
Chromium	mg/l	<0.001	<0.001	0.004	<0.001
Cobalt	mg/l	<0.01	<0.01	0.02	0.02
Copper	mg/l	<0.01	<0.01	0.01	0.02
Iron	mg/l	0.4	0.3	0.2	0.2
Lead	mg/l	0.001	0.001	0.003	<0.001
Manganese	mg/l	0.05	0.04	0.05	0.04
Mercury	mg/l	<0.0005	<0.0005	<0.0005	0.0008
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	0.003	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	0.01	0.03	0.04	0.02

See footnotes at end of table.

Table B-5
Well FUB05D
(Continued)

Parameters	Units	Sampling Location			
		11/15/90	1/30/91	4/22/91	8/7/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-5
Well FUB05D
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-5
Well FUB05D
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/21/92	7/23/92
Groundwater Elevation	ft msl	7.79	7.97	7.74	7.69
Temperature	°C	13.2	11.6	15.6	14.1
pH	pH units	6.65	6.31	6.92	6.00
Specific Conductance @ 25°C	µmhos/cm	230	110	120	120
Total Organic Carbon	mg/l	<1	<1	1	2.0
Alkalinity	mg/l $CaCO_3$	93	38	42	42.0
Chloride	mg/l	4.1	5.6	7.4	4.5
Nitrate	mg/l NO_3-N	0.8	0.8	1.2	0.92
Sulfate	mg/l	12	20	7	14
Sulfide	mg/l	0.4	1.4	<1	<1.0
Fluoride	mg/l	0.05	0.06	0.03	0.040
Ammonia	mg/l	<0.1	<0.1	0.2	<0.10
Nitrogen, Kjeldahl	mg/l	<0.1	2	2	2.0
Calcium	mg/l	11	11	10	11
Magnesium	mg/l	5	5	5	5.0
Sodium	mg/l	5	2	3	3.0
Potassium	mg/l	1.8	0.7	1	0.80
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.010
Phenolics, Total	mg/l	<0.01	0.01	0.02	0.10
Metals:					
Aluminum	mg/l	0.1	<0.1	0.2	<0.10
Antimony	mg/l	<0.1	<0.1	<0.1	<0.10
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.01	<0.01	0.01	<0.010
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.002	<0.001	<0.001	<0.001
Cobalt	mg/l	0.01	0.01	0.02	<0.010
Copper	mg/l	0.01	<0.01	<0.01	<0.010
Iron	mg/l	0.1	0.2	<0.1	0.10
Lead	mg/l	<0.001	0.002	<0.001	0.001
Manganese	mg/l	<0.01	0.03	0.03	0.030
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	<0.040
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	0.02	0.03	0.04	0.020

See footnotes at end of table.

Table B-5
Well FUB05D
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/21/92	7/23/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	9	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-5
Well FUB05D
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/22/92	4/21/92	7/23/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1)Dash denotes not analyzed.

Table B-6
Historical Groundwater Chemistry Data
Fairless Works
Well FUB06

Parameters	Units	Sampling Location			
		10/20/88	2/22/89	5/25/89	8/23/89
Groundwater Elevation	ft msl	6.39	6.97	9.15	7.81
Temperature	°C	14	13	15	18
pH	pH units	6.25	6.40	6.35	6.50
Specific Conductance @ 25°C	µmhos/cm	1350	1000	900	800
Total Organic Carbon	mg/l	7	8	15	9
Alkalinity	mg/l $CaCO_3$	40	-(1)	172	224
Chloride	mg/l	54	44	48	41
Nitrate	mg/l NO_3-N	0.5	-	<0.1	<0.1
Sulfate	mg/l	260	-	150	82
Sulfide	mg/l	<0.1	<1	<0.1	<1
Fluoride	mg/l	0.03	0.09	0.07	0.22
Ammonia	mg/l	2.9	4.2	3.9	6.0
Nitrogen, Kjeldahl	mg/l	2.9	4.2	3.0	22
Calcium	mg/l	74	84	66	81
Magnesium	mg/l	32	37	34	36
Sodium	mg/l	24	23	22	24
Potassium	mg/l	4.0	4.5	4.1	11
Cyanide	mg/l	<0.01	<0.01	<0.01	0.11
Phenolics, Total	mg/l	0.02	0.03	<0.01	0.03
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.1	0.2
Antimony	mg/l	<0.1	<0.1	<0.1	<0.1
Arsenic	mg/l	0.003	0.006	0.006	0.010
Barium	mg/l	0.22	0.22	0.5	0.27
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	<0.001	<0.001	0.007	0.001
Chromium	mg/l	0.005	<0.001	0.001	0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.02	<0.01	<0.01	<0.01
Iron	mg/l	90	55	69	51
Lead	mg/l	<0.001	<0.001	<0.001	<0.001
Manganese	mg/l	3.4	2.6	0.65	3.1
Mercury	mg/l	0.0025	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.2
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	0.001	<0.001
Thallium	mg/l	<0.001	<0.001	0.002	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.04	0.02	0.03	<0.01

See footnotes at end of table.

Table B-6
Well FUB06
(Continued)

Parameters	Units	Sampling Location			
		10/20/88	2/22/89	5/25/89	8/23/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	180	<10	-	-

See footnotes at end of table.

Table B-6
Well FUB06
(Continued)

Parameters	Units	Sampling Location 10/20/88	2/22/89	5/25/89	8/23/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	28	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	<10	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table B-6
Well FUB06
(Continued)

Parameters	Units	Sampling Location			
		11/16/89	2/14/90	5/23/90	8/14/90
Groundwater Elevation	ft msl	7.62	7.66	7.72	7.28
Temperature	°C	13	14	13	18
pH	pH units	6.85	6.20	6.95	6.60
Specific Conductance @ 25°C	µmhos/cm	800	750	800	700
Total Organic Carbon	mg/l	66	7	8	9
Alkalinity	mg/l $CaCO_3$	300	253	202	218
Chloride	mg/l	32	30	31	29
Nitrate	mg/l NO_3-N	<0.1	0.2	0.6	0.1
Sulfate	mg/l	65	100	72	68
Sulfide	mg/l	<1	2	<1	<1
Fluoride	mg/l	0.17	0.24	0.19	0.21
Ammonia	mg/l	5.5	5.3	4.8	5.2
Nitrogen, Kjeldahl	mg/l	6.2	5.3	6.4	5.3
Calcium	mg/l	64	62	52	48
Magnesium	mg/l	32	31	27	24
Sodium	mg/l	20	20	18	17
Potassium	mg/l	4.0	5.1	2.7	4.1
Cyanide	mg/l	<0.01	<0.01	<0.01	0.01
Phenolics, Total	mg/l	<0.01	0.02	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	<0.1	<0.1	<0.1
Antimony	mg/l	<0.1	<0.1	0.2	<0.1
Arsenic	mg/l	0.008	0.001	0.008	0.006
Barium	mg/l	0.09	0.21	0.19	0.17
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	<0.01	<0.01	<0.01	<0.01
Iron	mg/l	56	45	45	43
Lead	mg/l	<0.001	<0.001	<0.001	0.021
Manganese	mg/l	2.5	2.3	2.2	1.9
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.03	0.02	0.01	<0.01

See footnotes at end of table.

Table B-6
Well FUB06
(Continued)

Parameters	Units	Sampling Location			
		11/16/89	2/14/90	5/23/90	8/14/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-6
Well FUB06
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/14/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	42	-	-	11
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	19	-	-	12
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-6
Well FUB06
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/6/91
Groundwater Elevation	ft msl	6.41	7.38	6.85	6.24
Temperature	°C	15	14	15	18.2
pH	pH units	6.60	6.45	6.80	6.51
Specific Conductance @ 25°C	µmhos/cm	850	800	700	950
Total Organic Carbon	mg/l	7	10	7	10
Alkalinity	mg/l $CaCO_3$	138	206	232	239
Chloride	mg/l	33	34	29	40
Nitrate	mg/l NO_3-N	0.3	<0.1	0.6	<0.1
Sulfate	mg/l	310	94	116	24
Sulfide	mg/l	<1	<1	<1	1.5
Fluoride	mg/l	0.20	0.14	0.22	0.17
Ammonia	mg/l	6.1	5.9	5.9	5.5
Nitrogen, Kjeldahl	mg/l	7.5	6.9	7	6.3
Calcium	mg/l	79	61	64	52
Magnesium	mg/l	34	30	34	27
Sodium	mg/l	21	20	21	21
Potassium	mg/l	5.8	5.0	5.8	6.6
Cyanide	mg/l	<0.01	0.01	<0.01	0.01
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	0.5	0.3	<0.1
Antimony	mg/l	<0.1	0.1	0.3	<0.1
Arsenic	mg/l	0.006	0.010	0.007	0.008
Barium	mg/l	0.26	0.20	0.21	0.18
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	<0.001	<0.001	0.004	0.001
Cobalt	mg/l	<0.01	<0.01	0.02	<0.01
Copper	mg/l	<0.01	<0.01	0.02	<0.01
Iron	mg/l	47	48	56	52
Lead	mg/l	<0.001	<0.001	<0.001	<0.001
Manganese	mg/l	2.2	2.4	2.6	2.4
Mercury	mg/l	<0.0005	0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	0.002	<0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	0.01	0.01	0.02	0.01

See footnotes at end of table.

Table B-6
Well FUB06
(Continued)

Parameters	Units	Sampling Location			
		11/15/90	1/30/91	4/22/91	8/6/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-6
Well FUB06
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/6/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-6
Well FUB06
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/23/92	4/22/92	7/23/92
Groundwater Elevation	ft msl	6.07	6.02	5.99	6.44
Temperature	°C	16.5	12.7	15.6	15.5
pH	pH units	6.66	6.33	6.34	6.25
Specific Conductance @ 25°C	µmhos/cm	900	550	700	700
Total Organic Carbon	mg/l	9	6	6	7.0
Alkalinity	mg/l $CaCO_3$	280	291	241	212
Chloride	mg/l	29	20	29	25
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.10
Sulfate	mg/l	24	29	42	110
Sulfide	mg/l	2.9	3.2	<1	1.3
Fluoride	mg/l	0.24	0.29	0.21	0.14
Ammonia	mg/l	6.1	6.5	5.7	5.5
Nitrogen, Kjeldahl	mg/l	3.8	9	7	40
Calcium	mg/l	52	53	50	59
Magnesium	mg/l	28	28	27	31
Sodium	mg/l	22	17	16	19
Potassium	mg/l	8.1	5.7	5	5.2
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.010
Phenolics, Total	mg/l	<0.01	0.03	0.02	0.041
Metals:					
Aluminum	mg/l	0.2	<0.1	0.3	<0.10
Antimony	mg/l	<0.1	0.1	<0.1	<0.10
Arsenic	mg/l	0.012	0.013	0.007	0.009
Barium	mg/l	0.17	0.14	0.15	0.18
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.002	0.002	<0.001	<0.001
Cobalt	mg/l	<0.01	0.01	0.02	0.010
Copper	mg/l	<0.01	0.02	0.01	<0.010
Iron	mg/l	46	41	40	42
Lead	mg/l	<0.001	<0.001	<0.001	0.001
Manganese	mg/l	2.1	1.9	2	2.0
Mercury	mg/l	<0.0005	<0.0005	0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	<0.040
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	0.002	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	0.5	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	<0.01	0.02	0.02	0.040

See footnotes at end of table.

Table B-6
Well FUB06
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/23/92	4/22/92	7/23/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-6
Well FUB06
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/23/92	4/22/92	7/23/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1) Dash denotes not analyzed.

Table B-7
Historical Groundwater Chemistry Data
Fairlees Works
Well FUB07

Parameters	Units	Sampling Location			
		10/19/88	2/23/89	5/24/89	8/24/89
Groundwater Elevation	ft msl	6.07	6.85	8.67	7.35
Temperature	°C	13	8	12	14
pH	pH units	6.45	7.15	6.65	7.05
Specific Conductance @ 25°C	µmhos/cm	800	800	900	850
Total Organic Carbon	mg/l	3	2	5	4
Alkalinity	mg/l $CaCO_3$	96	-(1)	60	76
Chloride	mg/l	11	9.4	11	14
Nitrate	mg/l NO_3-N	0.8	-	<0.1	0.4
Sulfate	mg/l	310	-	350	310
Sulfide	mg/l	<0.1	<1	3.2	<1
Fluoride	mg/l	0.06	0.11	0.04	0.07
Ammonia	mg/l	0.2	<0.1	0.2	0.1
Nitrogen, Kjeldahl	mg/l	0.2	0.2	<0.1	<1
Calcium	mg/l	110	100	120	150
Magnesium	mg/l	16	16	16	17
Sodium	mg/l	13	11	12	12
Potassium	mg/l	24	16	17	18
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	0.01	0.03	<0.01
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.1	0.4
Antimony	mg/l	0.2	0.2	<0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.04	0.04	0.12	0.04
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	0.002	<0.001	0.001	<0.001
Chromium	mg/l	0.002	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.03	<0.01	0.01	0.01
Iron	mg/l	<0.1	0.1	0.4	0.3
Lead	mg/l	<0.001	<0.001	<0.001	<0.001
Manganese	mg/l	0.59	0.81	0.85	0.70
Mercury	mg/l	0.0074	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.3
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	0.001	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.03	0.02	0.03	<0.01

See footnotes at end of table.

Table B-7
Well FUB07
(Continued)

Parameters	Units	Sampling Location			
		10/19/88	2/23/89	5/24/89	8/24/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	12
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	140	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	290	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	<10	45000	-	-

See footnotes at end of table.

Table B-7
Well FUB07
(Continued)

Parameters	Units	Sampling Location 10/19/88	2/23/89	5/24/89	8/24/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	36	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	<10	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table B-7
Well FUB07
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/15/90
Groundwater Elevation	ft msl	7.27	7.32	7.37	7.00
Temperature	°C	15	14	12	18
pH	pH units	6.70	6.35	6.85	6.45
Specific Conductance @ 25°C	µmhos/cm	750	800	900	800
Total Organic Carbon	mg/l	21	3	2	3
Alkalinity	mg/l $CaCO_3$	94	75	76	68
Chloride	mg/l	15	25	30	29
Nitrate	mg/l NO_3-N	0.1	0.1	0.2	<0.1
Sulfate	mg/l	300	330	360	360
Sulfide	mg/l	<1	2	<1	<1
Fluoride	mg/l	0.04	0.07	0.10	0.08
Ammonia	mg/l	<0.1	<0.1	0.1	0.3
Nitrogen, Kjeldahl	mg/l	<0.1	<0.1	0.9	0.1
Calcium	mg/l	140	130	120	120
Magnesium	mg/l	17	18	17	16
Sodium	mg/l	11	12	11	12
Potassium	mg/l	14	21	21	19
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	0.03	0.01	0.02
Metals:					
Aluminum	mg/l	<0.1	<0.1	<0.1	<0.1
Antimony	mg/l	0.3	<0.1	<0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.06	0.02	0.03	0.02
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	0.001	<0.001	<0.001	<0.001
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	<0.01	0.01	<0.01	<0.01
Iron	mg/l	1.4	1.2	1.3	1.5
Lead	mg/l	<0.001	<0.001	<0.001	0.012
Manganese	mg/l	0.80	0.88	0.79	0.87
Mercury	mg/l	<0.0005	0.0007	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.03	0.01	<0.01	<0.01

See footnotes at end of table.

Table B-7
Well FUB07
(Continued)

Parameters	Units	Sampling Location			
		11/16/89	2/14/90	5/23/90	8/15/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-7
Well FUB07
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/15/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	40	-	-	10
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	18	-	-	<10
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-7
Well FUB07
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	6.19	7.02	6.57	5.89
Temperature	°C	13	12	14	14.4
pH	pH units	6.95	6.55	6.45	6.61
Specific Conductance @ 25°C	µmhos/cm	850	900	750	1000
Total Organic Carbon	mg/l	2	5	4	4
Alkalinity	mg/l $CaCO_3$	65	57	61	64
Chloride	mg/l	30	25	26	24
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.1
Sulfate	mg/l	360	370	390	350
Sulfide	mg/l	<1	<1	<1	0.3
Fluoride	mg/l	0.08	0.07	0.08	0.04
Ammonia	mg/l	0.1	0.1	<0.1	0.2
Nitrogen, Kjeldahl	mg/l	0.4	2.7	<1	0.2
Calcium	mg/l	110	120	150	110
Magnesium	mg/l	16	20	21	15
Sodium	mg/l	13	14	15	15
Potassium	mg/l	22	20	25	23
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	0.5	0.3	<0.1
Antimony	mg/l	<0.1	0.1	0.2	<0.1
Arsenic	mg/l	<0.001	0.001	<0.001	<0.001
Barium	mg/l	0.02	0.03	0.02	0.02
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	0.005	<0.001	0.003
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.01	<0.01	0.01	<0.01
Copper	mg/l	<0.01	<0.01	0.03	0.02
Iron	mg/l	1.4	1.4	1.9	1.6
Lead	mg/l	0.003	<0.001	0.005	<0.001
Manganese	mg/l	0.79	1.2	1.1	0.87
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	0.01	0.03	0.01	0.02

See footnotes at end of table.

Table B-7
Well FUB07
(Continued)

Parameters	Units	Sampling Location			
		11/15/90	1/30/91	4/22/91	8/7/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-7
Well FUB07
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-7
Well FUB07
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/22/92	7/23/92
Groundwater Elevation	ft msl	5.81	5.68	5.70	6.00
Temperature	°C	15.2	11.8	15.3	15.0
pH	pH units	6.44	6.20	6.83	6.55
Specific Conductance @ 25°C	µmhos/cm	1000	700	750	700
Total Organic Carbon	mg/l	2	2	2	7.0
Alkalinity	mg/l $CaCO_3$	76	72	70	72.0
Chloride	mg/l	21	19	28	19
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	0.15
Sulfate	mg/l	300	290	260	250
Sulfide	mg/l	0.3	0.4	<1	<1.0
Fluoride	mg/l	0.08	0.10	0.07	0.070
Ammonia	mg/l	<0.1	<0.1	<0.1	<0.10
Nitrogen, Kjeldahl	mg/l	<0.1	2	<1	<1.0
Calcium	mg/l	110	110	100	88
Magnesium	mg/l	16	15	14	14
Sodium	mg/l	16	12	12	12
Potassium	mg/l	25	21	20	20
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.010
Phenolics, Total	mg/l	<0.01	0.03	0.04	0.15
Metals:					
Aluminum	mg/l	0.2	<0.1	0.3	<0.10
Antimony	mg/l	<0.1	<0.1	<0.1	<0.10
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.02	0.02	0.02	<0.010
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	<0.001	<0.001	0.002	<0.001
Chromium	mg/l	0.002	<0.001	<0.001	<0.001
Cobalt	mg/l	0.01	<0.01	0.02	<0.010
Copper	mg/l	0.01	0.01	0.02	<0.010
Iron	mg/l	1.4	1.3	0.9	0.80
Lead	mg/l	<0.001	<0.001	0.002	0.002
Manganese	mg/l	0.76	0.81	0.8	0.76
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	<0.040
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	0.002
Tin	mg/l	<0.1	<0.1	<0.1	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	<0.01	0.08	0.02	<0.010

See footnotes at end of table.

Table B-7
Well FUB07
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/22/92	7/23/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-7
Well FUB07
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/22/92	7/23/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1) Dash denotes not analyzed.

Table B-8
Historical Groundwater Chemistry Data
Fairless Works
Well FUB08

Parameters	Units	Sampling Location			
		10/20/88	2/22/89	5/25/89	8/23/89
Groundwater Elevation	ft msl	5.89	6.42	8.45	7.13
Temperature	°C	14	12	15	18
pH	pH units	6.40	6.90	6.85	7.00
Specific Conductance @ 25°C	µmhos/cm	1200	1200	1200	1000
Total Organic Carbon	mg/l	3	3	4	14
Alkalinity	mg/l $CaCO_3$	128	-(1)	176	96
Chloride	mg/l	37	32	30	38
Nitrate	mg/l NO_3-N	0.2	-	<0.1	0.2
Sulfate	mg/l	430	-	420	420
Sulfide	mg/l	<0.1	<1	<0.1	<1
Fluoride	mg/l	0.08	0.13	0.08	0.14
Ammonia	mg/l	12	8.5	9.7	10
Nitrogen, Kjeldahl	mg/l	12	8.5	8.5	20
Calcium	mg/l	150	150	150	170
Magnesium	mg/l	44	42	37	43
Sodium	mg/l	22	21	19	22
Potassium	mg/l	10	8.6	8.2	11
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	<0.01	0.04	0.04
Metals:					
Aluminum	mg/l	<0.1	0.2	0.1	0.4
Antimony	mg/l	0.3	<0.1	0.1	<0.1
Arsenic	mg/l	0.001	0.001	<0.001	0.002
Barium	mg/l	0.07	0.08	0.05	0.11
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	<0.001	0.001	0.004	<0.001
Chromium	mg/l	0.002	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.02	<0.01	<0.01	0.01
Iron	mg/l	<0.1	0.3	0.7	2.3
Lead	mg/l	<0.001	<0.001	<0.001	<0.001
Manganese	mg/l	5.2	5.6	0.62	8.5
Mercury	mg/l	<0.0005	<0.0005	0.0008	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.3
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.04	0.02	0.02	<0.01

See footnotes at end of table.

Table B-8
Well FUB08
(Continued)

Parameters	Units	Sampling Location			
		10/20/88	2/22/89	5/25/89	8/23/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	6	590	12
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	<10	550	-	-

See footnotes at end of table.

Table B-8
Well FUB08
(Continued)

Parameters	Units	Sampling Location 10/20/88	2/22/89	5/25/89	8/23/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	22	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	7300	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table B-8
Well FUB08
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/14/90
Groundwater Elevation	ft msl	6.89	6.89	6.98	6.57
Temperature	°C	13	12	13	20
pH	pH units	6.85	6.25	6.85	6.85
Specific Conductance @ 25°C	µmhos/cm	1200	1100	1000	900
Total Organic Carbon	mg/l	39	4	4	3
Alkalinity	mg/l $CaCO_3$	180	190	183	163
Chloride	mg/l	36	28	23	24
Nitrate	mg/l NO_3-N	<0.1	<0.1	0.1	<0.1
Sulfate	mg/l	380	380	360	350
Sulfide	mg/l	<1	<1	2	<1
Fluoride	mg/l	0.06	0.11	0.05	0.10
Ammonia	mg/l	8.3	6.6	6.3	6.6
Nitrogen, Kjeldahl	mg/l	7.9	6.6	6.3	7.4
Calcium	mg/l	170	150	120	120
Magnesium	mg/l	39	36	29	27
Sodium	mg/l	19	21	18	17
Potassium	mg/l	7.6	12	11	11
Cyanide	mg/l	<0.01	<0.01	<0.01	0.05
Phenolics, Total	mg/l	<0.01	0.05	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	<0.1	<0.1	<0.1
Antimony	mg/l	0.2	<0.1	0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	0.001	0.001
Barium	mg/l	0.12	0.06	0.05	0.05
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	<0.01	0.01	<0.01	<0.01
Iron	mg/l	1.9	1.5	1.5	1.3
Lead	mg/l	<0.001	<0.001	0.001	<0.001
Manganese	mg/l	5.70	5.9	4.6	4.5
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	0.2	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.03	<0.01	<0.01	<0.01

See footnotes at end of table.

Table B-8
Well FUB08
(Continued)

Parameters	Units	Sampling Location			
		11/16/89	2/14/90	5/23/90	8/14/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	6	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-8
Well FUB08
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/14/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	60	-	-	<10
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	23	-	-	<10
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-8
Well FUB08
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	5.80	6.69	6.03	5.57
Temperature	°C	15	13	13	18.3
pH	pH units	7.00	6.60	-	6.86
Specific Conductance @ 25°C	µmhos/cm	950	950	950	1200
Total Organic Carbon	mg/l	3	3	3	3
Alkalinity	mg/l $CaCO_3$	158	161	159	171
Chloride	mg/l	25	22	18	21
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.1
Sulfate	mg/l	360	340	370	380
Sulfide	mg/l	<1	<1	5	0.5
Fluoride	mg/l	0.13	0.09	0.08	0.10
Ammonia	mg/l	6.8	6.6	5.2	6.1
Nitrogen, Kjeldahl	mg/l	7.1	6.6	5	6.2
Calcium	mg/l	120	120	150	130
Magnesium	mg/l	29	29	36	29
Sodium	mg/l	18	18	19	18
Potassium	mg/l	12	12	16	14
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	0.5	0.4	<0.1
Antimony	mg/l	<0.1	0.1	0.3	<0.1
Arsenic	mg/l	<0.001	0.002	<0.001	<0.001
Barium	mg/l	0.05	0.04	0.06	0.04
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.001	<0.001	0.004	<0.001
Cobalt	mg/l	<0.01	<0.01	0.02	<0.01
Copper	mg/l	<0.01	<0.01	0.04	0.02
Iron	mg/l	1.5	1.2	1.9	1.5
Lead	mg/l	<0.001	<0.001	0.003	0.001
Manganese	mg/l	4.4	4.8	5.8	4.8
Mercury	mg/l	<0.0005	0.0005	<0.0005	0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	<0.01	0.02	0.01	<0.01

See footnotes at end of table.

Table B-8
Well FUB08
(Continued)

Parameters	Units	Sampling Location			
		11/15/90	1/30/91	4/22/91	8/7/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-8
Well FUB08
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-8
Well FUB08
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/23/92	4/22/92	7/23/92
Groundwater Elevation	ft msl	5.35	5.32	5.30	5.62
Temperature	°C	16.8	12.4	14.4	15.2
pH	pH units	6.75	6.39	6.55	6.57
Specific Conductance @ 25°C	µmhos/cm	1300	900	900	900
Total Organic Carbon	mg/l	3	2	1	4.0
Alkalinity	mg/l $CaCO_3$	190	193	152	184
Chloride	mg/l	20	17	23	18
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.10
Sulfate	mg/l	320	310	240	270
Sulfide	mg/l	<0.1	<0.1	<1	<1.0
Fluoride	mg/l	0.10	0.11	0.08	0.080
Ammonia	mg/l	5.4	5.0	4.8	4.8
Nitrogen, Kjeldahl	mg/l	3.9	8	5	31
Calcium	mg/l	130	130	120	100
Magnesium	mg/l	32	29	28	27
Sodium	mg/l	19	14	13	14
Potassium	mg/l	16	13	13	13
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.010
Phenolics, Total	mg/l	<0.01	<0.01	0.01	0.058
Metals:					
Aluminum	mg/l	0.2	<0.1	0.5	<0.10
Antimony	mg/l	<0.1	<0.1	<0.1	<0.10
Arsenic	mg/l	0.001	0.001	<0.001	<0.001
Barium	mg/l	0.04	0.05	0.05	0.030
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	<0.001	<0.001	0.001	<0.001
Chromium	mg/l	0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.01	<0.01	0.03	0.020
Copper	mg/l	0.01	0.02	0.01	<0.010
Iron	mg/l	2.0	2.5	1	1.3
Lead	mg/l	<0.001	0.002	0.002	0.002
Manganese	mg/l	4.9	4.8	4	3.9
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	<0.040
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	<0.01	0.02	0.02	<0.010

See footnotes at end of table.

Table B-8
Well FUB08
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/23/92	4/22/92	7/23/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-8
Well FUB08
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/23/92	4/22/92	7/23/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1) Dash denotes not analyzed.

Table B-9
Historical Groundwater Chemistry Data
Fairless Works
Well FUB09

Parameters	Units	Sampling Location			
		10/19/88	2/23/89	5/24/89	8/24/89
Groundwater Elevation	ft msl	5.88	6.66	8.40	7.16
Temperature	°C	12	8	13	17
pH	pH units	6.55	7.10	6.55	6.70
Specific Conductance @ 25°C	µmhos/cm	975	975	950	800
Total Organic Carbon	mg/l	2	3	6	8
Alkalinity	mg/l $CaCO_3$	124	.(1)	116	124
Chloride	mg/l	21	15	13	16
Nitrate	mg/l NO_3-N	0.3	-	<0.1	<0.1
Sulfate	mg/l	370	-	350	350
Sulfide	mg/l	<0.1	2	<0.1	<1
Fluoride	mg/l	0.04	0.06	0.04	0.06
Ammonia	mg/l	1.5	1.0	1.0	1.1
Nitrogen, Kjeldahl	mg/l	1.5	1.0	1.0	1
Calcium	mg/l	130	120	140	180
Magnesium	mg/l	30	29	30	32
Sodium	mg/l	20	14	13	15
Potassium	mg/l	15	13	13	13
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	0.05
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.1	0.4
Antimony	mg/l	0.2	0.1	<0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.04	0.05	0.02	0.06
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	0.003	0.001	0.003	<0.001
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.02	<0.01	<0.01	0.01
Iron	mg/l	<0.1	0.3	0.3	0.1
Lead	mg/l	<0.001	<0.001	0.001	<0.001
Manganese	mg/l	1.6	0.31	0.28	0.46
Mercury	mg/l	0.0027	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.2
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	0.003	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.03	0.03	0.03	<0.01

See footnotes at end of table.

Table B-9
Well FUB09
(Continued)

Parameters	Units	Sampling Location			
		10/19/88	2/23/89	5/24/89	8/24/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	17	<5	410
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	9
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	<10	<10	-	-

See footnotes at end of table.

Table B-9
Well FUB09
(Continued)

Parameters	Units	Sampling Location 10/19/88	2/23/89	5/24/89	8/24/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	<10	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	12	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table B-9
Well FUB09
(Continued)

Parameters	Units	Sampling Location			
		11/16/89	2/14/90	5/23/90	8/15/90
Groundwater Elevation	ft msl	7.00	7.06	7.11	6.74
Temperature	°C	15	16	13	18
pH	pH units	6.75	6.65	6.85	6.35
Specific Conductance @ 25°C	µmhos/cm	1000	900	900	917
Total Organic Carbon	mg/l	27	3	3	3
Alkalinity	mg/l $CaCO_3$	160	140	129	106
Chloride	mg/l	17	17	19	19
Nitrate	mg/l NO_3-N	0.2	<0.1	0.1	<0.1
Sulfate	mg/l	350	350	350	340
Sulfide	mg/l	<1	3	<1	<1
Fluoride	mg/l	0.02	0.07	0.11	0.07
Ammonia	mg/l	0.8	0.7	0.9	1.0
Nitrogen, Kjeldahl	mg/l	1.0	0.7	1.5	4.1
Calcium	mg/l	110	140	120	110
Magnesium	mg/l	31	30	26	23
Sodium	mg/l	16	15	13	13
Potassium	mg/l	15	15	13	13
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	0.06	<0.01	0.06
Metals:					
Aluminum	mg/l	<0.1	<0.1	<0.1	<0.1
Antimony	mg/l	0.2	<0.1	0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	<0.001	0.001
Barium	mg/l	0.07	0.03	0.03	0.03
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	0.002	0.001	<0.001	<0.001
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	<0.01	0.01	<0.01	<0.01
Iron	mg/l	1.3	<0.1	0.1	<0.1
Lead	mg/l	<0.001	<0.001	<0.001	0.001
Manganese	mg/l	0.37	0.44	0.42	0.32
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.02	0.01	<0.01	<0.01

See footnotes at end of table.

Table B-9
Well FUB09
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/15/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	9	<5	37
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-9
Well FUB09
(Continued)

Parameters	Units	Sampling Location 11/16/89	2/14/90	5/23/90	8/15/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	50	-	-	<10
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	18	-	-	14
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-9
Well FUB09
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	5.97	6.77	6.31	5.67
Temperature	°C	13	12	14	15.1
pH	pH units	6.65	6.65	6.85	6.71
Specific Conductance @ 25°C	µmhos/cm	800	850	800	1050
Total Organic Carbon	mg/l	4	4	2	3
Alkalinity	mg/l $CaCO_3$	103	94	106	97
Chloride	mg/l	22	24	22	20
Nitrate	mg/l NO_3-N	0.1	2.0	<0.1	<0.1
Sulfate	mg/l	340	330	370	340
Sulfide	mg/l	<1	<1	<1	0.3
Fluoride	mg/l	0.10	0.07	0.06	0.08
Ammonia	mg/l	1.0	0.8	0.6	0.8
Nitrogen, Kjeldahl	mg/l	2.8	3.3	1	0.8
Calcium	mg/l	110	120	150	110
Magnesium	mg/l	24	25	31	21
Sodium	mg/l	13	14	16	15
Potassium	mg/l	15	15	19	16
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	<0.01
Metals:					
Aluminum	mg/l	0.1	0.5	0.4	<0.1
Antimony	mg/l	<0.1	0.1	0.3	<0.1
Arsenic	mg/l	<0.001	0.001	<0.001	<0.001
Barium	mg/l	0.03	0.02	0.04	0.03
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	<0.001	<0.001	0.004	<0.001
Cobalt	mg/l	<0.01	<0.01	0.02	<0.01
Copper	mg/l	<0.01	<0.01	0.04	0.02
Iron	mg/l	0.5	0.2	0.5	0.7
Lead	mg/l	<0.001	<0.001	<0.001	0.001
Manganese	mg/l	0.27	0.34	0.46	0.36
Mercury	mg/l	<0.0005	0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	0.001	<0.001	<0.001
Thallium	mg/l	0.001	0.002	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	<0.01	<0.01	0.03	<0.01

See footnotes at end of table.

Table B-9
Well FUB09
(Continued)

Parameters	Units	Sampling Location			
		11/15/90	1/30/91	4/22/91	8/7/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-9
Well FUB09
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-9
Well FUB09
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/22/92	7/23/92
Groundwater Elevation	ft msl	5.55	5.39	5.48	5.77
Temperature	°C	14.1	12.5	16.5	15.5
pH	pH units	6.50	6.30	6.81	6.34
Specific Conductance @ 25°C	µmhos/cm	1100	750	800	700
Total Organic Carbon	mg/l	2	2	1	3.0
Alkalinity	mg/l $CaCO_3$	120	109	98	101
Chloride	mg/l	19	17	26	19
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	0.69
Sulfate	mg/l	320	290	240	250
Sulfide	mg/l	1.1	0.2	<1	<1.0
Fluoride	mg/l	0.06	0.08	0.06	0.080
Ammonia	mg/l	0.5	0.5	0.5	0.43
Nitrogen, Kjeldahl	mg/l	<0.1	4	1	3.0
Calcium	mg/l	110	110	100	89
Magnesium	mg/l	23	21	20	20
Sodium	mg/l	14	12	15	12
Potassium	mg/l	16	14	14	15
Cyanide	mg/l	<0.01	<0.01	0.06	<0.010
Phenolics, Total	mg/l	<0.01	<0.01	0.01	0.19
Metals:					
Aluminum	mg/l	0.2	<0.1	0.1	<0.10
Antimony	mg/l	<0.1	<0.1	<0.1	<0.10
Arsenic	mg/l	0.002	0.004	<0.001	<0.001
Barium	mg/l	0.03	0.02	0.03	0.020
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	<0.001	0.001	0.001	<0.001
Chromium	mg/l	0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.01	<0.01	<0.01	0.010
Copper	mg/l	0.01	0.02	<0.01	<0.010
Iron	mg/l	0.2	0.3	0.3	0.20
Lead	mg/l	<0.001	0.004	<0.001	<0.001
Manganese	mg/l	0.26	0.33	0.4	0.27
Mercury	mg/l	0.0006	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	<0.040
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	0.003	<0.001	<0.001
Silver	mg/l	<0.001	0.008	<0.001	<0.001
Thallium	mg/l	<0.001	0.003	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	<0.01	0.06	0.02	<0.010

See footnotes at end of table.

Table B-9
Well FUB09
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/22/92	7/23/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<20
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-9
Well FUB09
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/22/92	4/22/92	7/23/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<20
Benzidine	µg/l	-	-	-	<100
1,2,4-Trichlorobenzene	µg/l	-	-	-	<20
Hexachlorobenzene	µg/l	-	-	-	<20
Hexachloroethane	µg/l	-	-	-	<20
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<20
2-Chloronaphthalene	µg/l	-	-	-	<20
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<20
2,4-Dinitrotoluene	µg/l	-	-	-	<20
2,6-Dinitrotoluene	µg/l	-	-	-	<20
Fluoranthene	µg/l	-	-	-	<20
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<20
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<20
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<20
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<20
Hexachlorobutadiene	µg/l	-	-	-	<20
Hexachlorocyclopentadiene	µg/l	-	-	-	<20
Isophorone	µg/l	-	-	-	<20
Naphthalene	µg/l	-	-	-	<20
Nitrobenzene	µg/l	-	-	-	<20
N-Nitrosodimethylamine	µg/l	-	-	-	<20
N-Nitrosodiphenylamine	µg/l	-	-	-	<20
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<20
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<20
Butyl Benzyl Phthalate	µg/l	-	-	-	<20
Di-n-Butyl Phthalate	µg/l	-	-	-	<20
Di-n-Octyl Phthalate	µg/l	-	-	-	<20
Diethyl Phthalate	µg/l	-	-	-	<20
Dimethyl Phthalate	µg/l	-	-	-	<20
Benzo(a)Anthracene	µg/l	-	-	-	<20
Benzo(a)Pyrene	µg/l	-	-	-	<20
Benzo(b)Fluoranthene	µg/l	-	-	-	<20
Benzo(k)Fluoranthene	µg/l	-	-	-	<20
Chrysene	µg/l	-	-	-	<20
Acenaphthylene	µg/l	-	-	-	<20
Anthracene	µg/l	-	-	-	<20
Benzo(g,h,i)Perylene	µg/l	-	-	-	<20
Fluorene	µg/l	-	-	-	<20
Phenanthrene	µg/l	-	-	-	<20
Dibenzo(ah)Anthracene	µg/l	-	-	-	<20
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<20
Pyrene	µg/l	-	-	-	<20
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1) Dash denotes not analyzed.

Table B-10
Historical Groundwater Chemistry Data
Fairless Works
Well FUB10D

Parameters	Units	Sampling Location			
		10/19/88	2/23/89	5/24/89	8/24/89
Groundwater Elevation	ft msl	4.79	6.29	7.69	6.78
Temperature	°C	13	8	11	18
pH	pH units	7.20	7.25	6.45	6.95
Specific Conductance @ 25°C	µmhos/cm	95	90	120	110
Total Organic Carbon	mg/l	3	3	4	2
Alkalinity	mg/l $CaCO_3$	28	(1)	32	32
Chloride	mg/l	4.2	3.8	4.9	6.3
Nitrate	mg/l NO_3-N	0.2	-	<0.1	<0.1
Sulfate	mg/l	30	-	13	33
Sulfide	mg/l	<0.1	<1	<0.1	<1
Fluoride	mg/l	0.05	0.09	0.06	0.10
Ammonia	mg/l	0.1	<0.1	<0.1	<0.1
Nitrogen, Kjeldahl	mg/l	0.1	0.2	<0.1	<1
Calcium	mg/l	9	11	8	6
Magnesium	mg/l	2.4	2.8	3	3
Sodium	mg/l	8	5	6	5
Potassium	mg/l	1.9	1.2	4.2	2.3
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	0.02	0.02	<0.01	0.02
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.1	0.4
Antimony	mg/l	<0.1	0.3	<0.1	<0.1
Arsenic	mg/l	0.001	0.002	0.002	0.003
Barium	mg/l	<0.01	0.01	0.07	0.01
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	<0.001	<0.001	0.004	0.002
Chromium	mg/l	0.002	0.002	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.02	<0.01	<0.01	0.01
Iron	mg/l	0.8	2.4	0.6	5.8
Lead	mg/l	<0.001	<0.001	<0.001	<0.001
Manganese	mg/l	0.13	0.13	0.18	0.21
Mercury	mg/l	0.0039	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.2
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.03	0.02	0.03	<0.01

See footnotes at end of table.

Table B-10
Well FUB10D
(Continued)

Parameters	Units	Sampling Location			
		10/19/88	2/23/89	5/24/89	8/24/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	<10	<10	-	-

See footnotes at end of table.

Table B-10
Well FUB10D
(Continued)

Parameters	Units	Sampling Location 10/19/88	2/23/89	5/24/89	8/24/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	12	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	<10	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table B-10
Well FUB10D
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/23/90	8/15/90
Groundwater Elevation	ft msl	6.42	6.24	6.29	6.05
Temperature	°C	14	14	14	18
pH	pH units	6.70	7.15	6.80	6.60
Specific Conductance @ 25°C	µmhos/cm	110	1000	100	150
Total Organic Carbon	mg/l	8	2	2	<1
Alkalinity	mg/l $CaCO_3$	41	42	44	44
Chloride	mg/l	3.2	3.1	1.9	2.0
Nitrate	mg/l NO_3-N	<0.1	<0.1	0.1	<0.1
Sulfate	mg/l	10	14	17	7
Sulfide	mg/l	<1	2	<1	<1
Fluoride	mg/l	0.04	0.11	0.10	0.10
Ammonia	mg/l	<0.1	<0.1	<0.1	0.2
Nitrogen, Kjeldahl	mg/l	<0.1	<0.1	0.8	2.3
Calcium	mg/l	8	7	7	7
Magnesium	mg/l	3	3	2	2
Sodium	mg/l	5	4	4	4
Potassium	mg/l	2.2	3.0	<0.1	3.5
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	0.03	0.03	0.01	0.01
Metals:					
Aluminum	mg/l	<0.1	<0.1	<0.1	<0.1
Antimony	mg/l	<0.1	<0.1	<0.1	<0.1
Arsenic	mg/l	0.003	0.003	0.004	0.003
Barium	mg/l	0.03	0.01	0.02	0.02
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	0.002	<0.001	<0.001	<0.001
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	<0.01	<0.01	<0.01	<0.01
Iron	mg/l	5.6	3.8	3.1	3.1
Lead	mg/l	0.002	<0.001	<0.001	<0.001
Manganese	mg/l	0.14	0.17	0.11	0.12
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.02	<0.01	0.01	0.02

See footnotes at end of table.

Table B-10
Well FUB10D
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/23/90	8/15/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-10
Well FUB10D
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/23/90	8/15/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	59	-	-	10
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	18	-	-	15
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-10
Well FUB10D
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	5.23	5.87	5.24	4.89
Temperature	°C	12	12	14	15.6
pH	pH units	7.25	6.75	7.30	6.74
Specific Conductance @ 25°C	µmhos/cm	90	100	145	140
Total Organic Carbon	mg/l	<1	2	1	1
Alkalinity	mg/l $CaCO_3$	36	40	50	35
Chloride	mg/l	2.3	45	20	2.5
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.1
Sulfate	mg/l	<10	18	<10	10
Sulfide	mg/l	<1	<1	<1	2.5
Fluoride	mg/l	0.09	0.09	0.07	0.09
Ammonia	mg/l	0.1	<0.1	<0.1	<0.1
Nitrogen, Kjeldahl	mg/l	0.8	2.5	<1	<0.1
Calcium	mg/l	6	8	10	7
Magnesium	mg/l	3	3	4	3
Sodium	mg/l	3	4	4	6
Potassium	mg/l	2.7	2.4	2.4	4.4
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	0.04
Metals:					
Aluminum	mg/l	0.2	0.5	0.3	<0.1
Antimony	mg/l	<0.1	0.1	0.2	<0.1
Arsenic	mg/l	0.003	0.004	0.004	0.003
Barium	mg/l	0.03	0.01	0.03	0.02
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	0.002	<0.001
Chromium	mg/l	<0.001	<0.001	0.004	0.002
Cobalt	mg/l	<0.01	<0.01	0.02	<0.01
Copper	mg/l	<0.01	<0.01	0.02	0.01
Iron	mg/l	3.8	4.0	6.0	4.0
Lead	mg/l	<0.001	<0.001	0.005	<0.001
Manganese	mg/l	0.11	0.16	0.19	0.12
Mercury	mg/l	<0.0005	<0.0005	<0.0005	0.0007
Nickel	mg/l	0.5	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	0.002	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	<0.01	<0.01	0.02	<0.01

See footnotes at end of table.

Table B-10
Well FUB10D
(Continued)

Parameters	Units	Sampling Location			
		11/15/90	1/30/91	4/22/91	8/7/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-10
Well FUB10D
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-10
Well FUB10D
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/22/92	7/23/92
Groundwater Elevation	ft msl	4.61	4.28	4.26	4.66
Temperature	°C	13.8	12.0	15.4	15.7
pH	pH units	6.41	6.30	6.92	6.46
Specific Conductance @ 25°C	µmhos/cm	300	100	110	150
Total Organic Carbon	mg/l	<1	1	<1	1.0
Alkalinity	mg/l $CaCO_3$	57	32	50	36.0
Chloride	mg/l	2.4	2.8	2.7	2.9
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.10
Sulfate	mg/l	7	21	4	<10
Sulfide	mg/l	7.2	3.8	<1	1.0
Fluoride	mg/l	0.09	0.09	0.06	0.060
Ammonia	mg/l	0.1	<0.1	<0.1	<0.10
Nitrogen, Kjeldahl	mg/l	<0.1	4	2	1.0
Calcium	mg/l	8	8	8	7.0
Magnesium	mg/l	3	3	3	3.0
Sodium	mg/l	7	3	3	3.0
Potassium	mg/l	5.6	1.7	3	1.3
Cyanide	mg/l	<0.01	0.02	<0.01	<0.010
Phenolics, Total	mg/l	<0.01	0.02	0.05	0.20
Metals:					
Aluminum	mg/l	0.2	<0.1	0.2	<0.10
Antimony	mg/l	<0.1	<0.1	<0.1	<0.10
Arsenic	mg/l	0.002	0.003	0.003	0.004
Barium	mg/l	0.02	0.02	0.02	0.020
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.01	<0.01	<0.01	0.010
Copper	mg/l	0.02	0.01	<0.01	<0.010
Iron	mg/l	4.2	4.5	4	4.0
Lead	mg/l	<0.001	<0.001	<0.001	0.001
Manganese	mg/l	0.14	0.15	0.2	0.12
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	<0.040
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	0.01	0.02	0.02	<0.010

See footnotes at end of table.

Table B-10
Well FUB10D
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/22/92	7/23/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-10
Well FUB10D
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/22/92	4/22/92	7/23/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1) Dash denotes not analyzed.

Table B-11
Historical Groundwater Chemistry Data
Fairless Works
Well FUB11

Parameters	Units	Sampling Location			
		10/19/88	2/23/89	5/24/89	8/24/89
Groundwater Elevation	ft msl	5.63	6.43	8.08	6.84
Temperature	°C	13	8	13	18
pH	pH units	7.10	6.95	6.45	6.85
Specific Conductance @ 25°C	µmhos/cm	875	900	1000	600
Total Organic Carbon	mg/l	2	5	4	4
Alkalinity	mg/l $CaCO_3$	112	-(1)	98	96
Chloride	mg/l	15	15	14	14
Nitrate	mg/l NO_3-N	1.0	-	<0.1	<0.1
Sulfate	mg/l	340	-	340	330
Sulfide	mg/l	<0.1	<1	<0.1	<1
Fluoride	mg/l	0.03	0.04	0.02	0.03
Ammonia	mg/l	0.3	0.2	0.4	0.3
Nitrogen, Kjeldahl	mg/l	0.3	0.2	0.4	<1
Calcium	mg/l	120	120	120	150
Magnesium	mg/l	25	24	26	25
Sodium	mg/l	17	15	15	15
Potassium	mg/l	17	14	11	13
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	0.01	0.01	0.02
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.2	0.4
Antimony	mg/l	<0.1	0.6	<0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.04	0.05	0.05	0.05
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	0.24	<0.001	0.004	<0.001
Chromium	mg/l	0.003	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.03	<0.01	0.01	0.01
Iron	mg/l	0.4	<0.1	0.2	0.2
Lead	mg/l	0.001	<0.001	<0.001	<0.001
Manganese	mg/l	0.61	0.48	0.64	0.55
Mercury	mg/l	0.030	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.2
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	0.018	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.06	0.03	0.03	<0.01

See footnotes at end of table.

Table B-11
Well FUB11
(Continued)

Parameters	Units	Sampling Location			
		10/19/88	2/23/89	5/24/89	8/24/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	340
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	11
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	<10	<10	-	-

See footnotes at end of table.

Table B-11
Well FUB11
(Continued)

Parameters	Units	Sampling Location 10/19/88	2/23/89	5/24/89	8/24/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	11	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	<10	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table B-11
Well FUB11
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/23/90	8/15/90
Groundwater Elevation	ft msl	6.64	6.72	6.78	6.41
Temperature	°C	14	14	15	18
pH	pH units	5.80	6.75	6.80	6.35
Specific Conductance @ 25°C	µmhos/cm	850	800	800	700
Total Organic Carbon	mg/l	15	4	3	3
Alkalinity	mg/l $CaCO_3$	110	96	103	91
Chloride	mg/l	12	14	15	18
Nitrate	mg/l NO_3-N	<0.1	<0.1	0.1	<0.1
Sulfate	mg/l	270	310	340	330
Sulfide	mg/l	<1	2	<1	1
Fluoride	mg/l	0.01	0.04	0.14	0.04
Ammonia	mg/l	0.2	<0.1	0.3	0.5
Nitrogen, Kjeldahl	mg/l	<0.1	<0.1	0.5	1.1
Calcium	mg/l	120	110	100	110
Magnesium	mg/l	24	24	22	22
Sodium	mg/l	14	13	13	13
Potassium	mg/l	11	15	13	14
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	<0.1	<0.1	<0.1
Antimony	mg/l	<0.1	<0.1	<0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	<0.001	0.001
Barium	mg/l	0.06	0.03	0.03	0.03
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	0.001
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	0.01	0.01	<0.01	<0.01
Iron	mg/l	0.3	<0.1	<0.1	0.1
Lead	mg/l	<0.001	<0.001	<0.001	<0.001
Manganese	mg/l	0.46	0.44	0.37	0.40
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.03	<0.01	<0.01	<0.01

See footnotes at end of table.

Table B-11
Well FUB11
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/23/90	8/15/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	57	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-11
Well FUB11
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/23/90	8/15/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	53	-	-	15
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	19	-	-	16
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-11
Well FUB11
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	5.68	6.46	5.90	5.31
Temperature	°C	12	11	15	16.1
pH	pH units	7.05	6.15	6.95	6.62
Specific Conductance @ 25°C	µmhos/cm	800	900	900	1100
Total Organic Carbon	mg/l	3	3	4	4
Alkalinity	mg/l $CaCO_3$	95	102	114	82
Chloride	mg/l	24	26	29	28
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.1
Sulfate	mg/l	350	340	490	370
Sulfide	mg/l	<1	<1	<1	0.3
Fluoride	mg/l	0.04	0.05	0.04	0.07
Ammonia	mg/l	0.4	0.2	0.3	0.5
Nitrogen, Kjeldahl	mg/l	1.2	2.4	<1	1.9
Calcium	mg/l	110	120	150	110
Magnesium	mg/l	22	24	30	22
Sodium	mg/l	13	15	16	16
Potassium	mg/l	15	19	19	18
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	0.5	0.3	<0.1
Antimony	mg/l	<0.1	0.1	0.3	<0.1
Arsenic	mg/l	<0.001	0.001	<0.001	<0.001
Barium	mg/l	0.03	0.02	0.04	0.03
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	0.003	<0.001	<0.001
Chromium	mg/l	0.007	<0.001	0.003	0.002
Cobalt	mg/l	<0.01	<0.01	0.02	<0.01
Copper	mg/l	<0.01	<0.01	0.04	0.01
Iron	mg/l	0.2	<0.1	0.1	<0.1
Lead	mg/l	0.002	<0.001	<0.001	0.001
Manganese	mg/l	0.44	0.45	0.57	0.44
Mercury	mg/l	<0.0005	<0.0005	<0.0005	0.0011
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	0.002	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	0.01	0.02	0.02	0.04

See footnotes at end of table.

Table B-11
Well FUB11
(Continued)

Parameters	Units	Sampling Location			
		11/15/90	1/30/91	4/22/91	8/7/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-11
Well FUB11
(Continued)

Parameters	Units	Sampling Location 11/15/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-11
Well FUB11
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/22/92	7/23/92
Groundwater Elevation	ft msl	5.19	5.03	5.14	5.41
Temperature	°C	14.3	12.4	15.5	16.3
pH	pH units	6.42	6.43	6.84	6.48
Specific Conductance @ 25°C	µmhos/cm	1100	800	850	800
Total Organic Carbon	mg/l	2	2	2	9.0
Alkalinity	mg/l $CaCO_3$	88	81	86	80.0
Chloride	mg/l	26	23	32	25
Nitrate	mg/l NO_3-N	<0.1	0.1	0.1	<0.10
Sulfate	mg/l	330	320	260	290
Sulfide	mg/l	<0.1	<0.1	<1	<1.0
Fluoride	mg/l	0.05	0.06	0.04	0.040
Ammonia	mg/l	0.3	0.2	<0.1	0.18
Nitrogen, Kjeldahl	mg/l	<0.1	2	3	2.0
Calcium	mg/l	120	120	110	110
Magnesium	mg/l	24	23	21	22
Sodium	mg/l	18	13	14	12
Potassium	mg/l	19	16	17	15
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.010
Phenolics, Total	mg/l	<0.01	0.02	0.02	0.38
Metals:					
Aluminum	mg/l	0.1	<0.1	0.5	<0.10
Antimony	mg/l	<0.1	<0.1	<0.1	<0.10
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.03	0.03	0.04	0.030
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	<0.001	<0.001	0.002	<0.001
Chromium	mg/l	0.002	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.01	<0.01	0.03	0.010
Copper	mg/l	0.01	0.01	0.02	<0.010
Iron	mg/l	<0.1	<0.1	<0.1	0.10
Lead	mg/l	0.002	0.002	<0.001	0.001
Manganese	mg/l	0.43	0.41	0.4	0.40
Mercury	mg/l	0.0007	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	<0.040
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	0.003	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	<0.01	0.02	0.04	<0.010

See footnotes at end of table.

Table B-11
Well FUB11
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/22/92	7/23/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-11
Well FUB11
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/22/92	7/23/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1) Dash denotes not analyzed.

Table B-12
Historical Groundwater Chemistry Data
Fairless Works
Well FUB12

Parameters	Units	Sampling Location			
		10/20/88	2/23/89	5/24/89	8/24/89
Groundwater Elevation	ft msl	5.72	6.50	8.20	6.95
Temperature	°C	-(1)	10	14	18
pH	pH units	6.60	6.90	6.85	6.85
Specific Conductance @ 25°C	µmhos/cm	1300	1300	1400	1000
Total Organic Carbon	mg/l	4	5	9	4
Alkalinity	mg/l $CaCO_3$	96	-	216	100
Chloride	mg/l	69	65	64	63
Nitrate	mg/l NO_3-N	0.9	-	<0.1	<0.1
Sulfate	mg/l	250	-	320	310
Sulfide	mg/l	<0.1	<1	<0.1	<1
Fluoride	mg/l	0.14	0.24	0.14	0.34
Ammonia	mg/l	52	48	54	47
Nitrogen, Kjeldahl	mg/l	52	48	48	47
Calcium	mg/l	88	89	110	120
Magnesium	mg/l	20	22	25	26
Sodium	mg/l	32	31	33	36
Potassium	mg/l	11	9.5	12	11
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	0.02	0.01	0.04
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.1	0.4
Antimony	mg/l	<0.1	0.8	<0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.03	0.03	0.09	0.03
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	0.006	<0.001	0.003	0.001
Chromium	mg/l	0.002	<0.001	<0.001	0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	<0.01	<0.01	<0.01	0.01
Iron	mg/l	<0.1	<0.1	0.1	0.1
Lead	mg/l	<0.001	<0.001	<0.001	<0.001
Manganese	mg/l	3.5	4.6	0.55	5.6
Mercury	mg/l	0.0014	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.2
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	0.008	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.02	0.03	0.02	<0.01

See footnotes at end of table.

Table B-12
Well FUB12
(Continued)

Parameters	Units	Sampling Location			
		10/20/88	2/23/89	5/24/89	8/24/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	9	<5	760
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	25
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	<10	<10	-	-

See footnotes at end of table.

Table B-12
Well FUB12
(Continued)

Parameters	Units	Sampling Location 10/20/88	2/23/89	5/24/89	8/24/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	13	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	<10	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table B-12
Well FUB12
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/22/90	8/15/90
Groundwater Elevation	ft msl	6.75	6.82	6.86	6.49
Temperature	°C	16	15	13	18
pH	pH units	7.00	6.85	7.05	6.70
Specific Conductance @ 25°C	µmhos/cm	1300	1200	1300	1100
Total Organic Carbon	mg/l	49	6	7	6
Alkalinity	mg/l $CaCO_3$	250	238	131	187
Chloride	mg/l	55	49	41	38
Nitrate	mg/l NO_3-N	<0.1	<0.1	0.2	0.1
Sulfate	mg/l	280	330	370	370
Sulfide	mg/l	<1	2	<1	<1
Fluoride	mg/l	0.19	0.30	0.31	0.33
Ammonia	mg/l	43	51	44	44
Nitrogen, Kjeldahl	mg/l	48	51	45	44
Calcium	mg/l	110	99	95	90
Magnesium	mg/l	28	25	26	24
Sodium	mg/l	30	30	24	23
Potassium	mg/l	7.9	11	7.8	7.8
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	0.07	0.02	0.01	0.01
Metals:					
Aluminum	mg/l	<0.1	<0.1	<0.1	<0.1
Antimony	mg/l	0.2	<0.1	0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.06	0.02	0.03	0.02
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	0.001	<0.001	<0.001
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	0.01	<0.01	<0.01	<0.01
Iron	mg/l	0.2	<0.1	<0.1	<0.1
Lead	mg/l	<0.001	<0.001	<0.001	0.001
Manganese	mg/l	4.6	5.3	4.0	4.1
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.03	<0.01	<0.01	<0.01

See footnotes at end of table.

Table B-12
Well FUB12
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/22/90	8/15/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	91	<5	150
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-12
Well FUB12
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/22/90	8/15/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	53	-	-	12
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	16	-	-	11
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-12
Well FUB12
(Continued)

Parameters	Units	Sampling Location 11/14/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	5.77	6.57	5.92	5.36
Temperature	°C	15	-	14	18.5
pH	pH units	7.00	6.65	6.50	6.87
Specific Conductance @ 25°C	µmhos/cm	1100	1000	1100	1450
Total Organic Carbon	mg/l	4	9	8	3
Alkalinity	mg/l $CaCO_3$	151	209	183	187
Chloride	mg/l	37	35	32	30
Nitrate	mg/l NO_3-N	0.6	<0.1	0.4	<0.1
Sulfate	mg/l	370	360	390	380
Sulfide	mg/l	<1	<1	2	0.5
Fluoride	mg/l	0.41	0.24	0.24	0.27
Ammonia	mg/l	47	44	37	41
Nitrogen, Kjeldahl	mg/l	34	44	42	42
Calcium	mg/l	93	100	100	96
Magnesium	mg/l	26	28	28	25
Sodium	mg/l	24	24	22	20
Potassium	mg/l	8.9	8.8	8.8	7.9
Cyanide	mg/l	<0.01	<0.01	0.01	0.02
Phenolics, Total	mg/l	0.01	0.02	0.02	0.14
Metals:					
Aluminum	mg/l	<0.1	0.5	0.3	<0.1
Antimony	mg/l	<0.1	0.1	0.3	<0.1
Arsenic	mg/l	<0.001	0.001	<0.001	<0.001
Barium	mg/l	0.03	0.01	0.03	0.02
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	0.001
Chromium	mg/l	<0.001	<0.001	0.003	0.001
Cobalt	mg/l	<0.01	<0.01	0.02	<0.01
Copper	mg/l	<0.01	<0.01	0.05	<0.01
Iron	mg/l	<0.1	<0.1	<0.1	<0.1
Lead	mg/l	<0.001	0.002	<0.001	<0.001
Manganese	mg/l	3.8	3.8	4.0	4.5
Mercury	mg/l	<0.0005	0.0008	<0.0005	0.0012
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	0.002	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	0.01	0.02	0.02	<0.01

See footnotes at end of table.

Table B-12
Well FUB12
(Continued)

Parameters	Units	Sampling Location			
		11/14/90	1/30/91	4/22/91	8/7/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-12
Well FUB12
(Continued)

Parameters	Units	Sampling Location 11/14/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-12
Well FUB12
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/22/92	4/22/92	7/23/92
Groundwater Elevation	ft msl	5.24	5.08	5.18	5.42
Temperature	°C	16.4	13.2	15.5	15.7
pH	pH units	6.77	6.64	6.78	6.79
Specific Conductance @ 25°C	µmhos/cm	1400	1010	1100	1000
Total Organic Carbon	mg/l	3	3	2	10
Alkalinity	mg/l $CaCO_3$	210	196	115	192
Chloride	mg/l	27	26	35	27
Nitrate	mg/l NO_3-N	<0.1	0.1	<0.1	0.11
Sulfate	mg/l	320	310	310	310
Sulfide	mg/l	<0.1	<0.1	<1	<1.0
Fluoride	mg/l	0.30	0.28	0.23	0.21
Ammonia	mg/l	<0.1	44	37	35
Nitrogen, Kjeldahl	mg/l	35	36	31	190
Calcium	mg/l	100	110	98	100
Magnesium	mg/l	28	23	27	30
Sodium	mg/l	22	19	16	18
Potassium	mg/l	9.7	7.6	8	8.1
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.010
Phenolics, Total	mg/l	<0.01	0.07	0.02	0.30
Metals:					
Aluminum	mg/l	0.2	<0.1	0.5	<0.10
Antimony	mg/l	<0.1	<0.1	<0.1	<0.10
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	0.02	0.02	0.03	0.020
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	<0.001	<0.001	0.001	<0.001
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	0.01	0.01	0.03	<0.010
Copper	mg/l	0.01	0.01	0.01	<0.010
Iron	mg/l	<0.1	<0.1	<0.1	<0.10
Lead	mg/l	<0.001	0.003	<0.001	0.001
Manganese	mg/l	4.7	0.41	4	4.9
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	<0.040
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	<0.01	0.03	0.02	<0.010

See footnotes at end of table.

Table B-12
Well FUB12
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/22/92	7/23/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-12
Well FUB12
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/22/92	4/22/92	7/23/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1) Dash denotes not analyzed.

Table B-13
Historical Groundwater Chemistry Data
Fairless Works
Well FUB13

Parameters	Units	Sampling Location			
		10/19/88	2/23/89	5/24/89	8/23/89
Groundwater Elevation	ft msl	5.60	6.29	7.61	6.74
Temperature	°C	20	11	15	20
pH	pH units	9.35	7.80	7.55	8.00
Specific Conductance @ 25°C	µmhos/cm	900	1050	1200	700
Total Organic Carbon	mg/l	2	5	4	3
Alkalinity	mg/l $CaCO_3$	72	-(1)	152	12
Chloride	mg/l	38	32	35	24
Nitrate	mg/l NO_3-N	0.2	-	<0.1	<0.1
Sulfate	mg/l	230	-	420	310
Sulfide	mg/l	<0.1	<1	<0.1	<1
Fluoride	mg/l	0.32	0.69	0.44	0.64
Ammonia	mg/l	18	20	21	18
Nitrogen, Kjeldahl	mg/l	18	20	17	26
Calcium	mg/l	96	89	130	120
Magnesium	mg/l	12	24	39	24
Sodium	mg/l	22	20	23	20
Potassium	mg/l	16	12	12	12
Cyanide	mg/l	<0.01	<0.01	<0.01	0.04
Phenolics, Total	mg/l	0.01	0.02	<0.01	0.08
Metals:					
Aluminum	mg/l	<0.1	0.2	0.1	0.4
Antimony	mg/l	<0.1	4.1	<0.1	<0.1
Arsenic	mg/l	0.001	0.001	<0.001	<0.001
Barium	mg/l	0.03	0.06	0.19	0.09
Beryllium	mg/l	<0.01	0.02	<0.01	<0.01
Cadmium	mg/l	<0.001	<0.001	0.002	<0.001
Chromium	mg/l	0.003	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.02	<0.01	<0.01	0.01
Iron	mg/l	<0.1	<0.1	1.0	0.6
Lead	mg/l	<0.001	<0.001	0.001	<0.001
Manganese	mg/l	0.34	1.3	0.82	1.3
Mercury	mg/l	0.0043	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.2
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	0.002	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.02	0.02	0.06	<0.01

See footnotes at end of table.

Table B-13
Well FUB13
(Continued)

Parameters	Units	Sampling Location			
		10/19/88	2/23/89	5/24/89	8/23/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	11	170
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	26	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	10000	130	-	-

See footnotes at end of table.

Table B-13
Well FUB13
(Continued)

Parameters	Units	Sampling Location 10/19/88	2/23/89	5/24/89	8/23/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	14	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	<10	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	13	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table B-13
Well FUB13
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/23/90	8/15/90
Groundwater Elevation	ft msl	6.55	6.58	6.66	6.28
Temperature	°C	18	14	15	23
pH	pH units	7.75	7.25	7.40	6.45
Specific Conductance @ 25°C	µmhos/cm	1000	950	1050	900
Total Organic Carbon	mg/l	19	4	3	4
Alkalinity	mg/l $CaCO_3$	140	138	141	126
Chloride	mg/l	21	25	24	24
Nitrate	mg/l NO_3-N	<0.1	<0.1	0.1	0.5
Sulfate	mg/l	300	330	340	320
Sulfide	mg/l	<1	2	<1	<1
Fluoride	mg/l	0.30	0.49	0.44	0.48
Ammonia	mg/l	15	16	13	13
Nitrogen, Kjeldahl	mg/l	15	16	13	13
Calcium	mg/l	110	110	99	98
Magnesium	mg/l	28	27	25	22
Sodium	mg/l	18	17	16	16
Potassium	mg/l	15	16	15	14
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	0.01	<0.01	0.03
Metals:					
Aluminum	mg/l	0.2	<0.1	0.3	<0.1
Antimony	mg/l	<0.1	<0.1	<0.1	<0.1
Arsenic	mg/l	<0.001	<0.001	0.002	0.002
Barium	mg/l	0.07	0.04	0.05	0.04
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	<0.01	0.01	<0.01	<0.01
Iron	mg/l	1.3	2.1	2.4	1.8
Lead	mg/l	<0.001	<0.001	<0.001	0.001
Manganese	mg/l	2.4	3.0	2.7	2.6
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	0.004	0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.03	<0.01	0.01	0.02

See footnotes at end of table.

Table B-13
Well FUB13
(Continued)

Parameters	Units	Sampling Location			
		11/15/89	2/14/90	5/23/90	8/15/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	10
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	21
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-13
Well FUB13
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/23/90	8/15/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	24	-	-	10
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	<10	-	-	<10
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-13
Well FUB13
(Continued)

Parameters	Units	Sampling Location 11/14/90	1/30/91	4/22/91	8/6/91
Groundwater Elevation	ft msl	5.58	6.33	5.66	5.15
Temperature	°C	17	14	13	18.0
pH	pH units	6.95	6.65	6.35	7.22
Specific Conductance @ 25°C	µmhos/cm	600	900	900	1200
Total Organic Carbon	mg/l	3	3	3	3
Alkalinity	mg/l $CaCO_3$	105	154	129	156
Chloride	mg/l	22	22	22	22
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.1
Sulfate	mg/l	240	300	370	360
Sulfide	mg/l	<1	<1	<1	0.7
Fluoride	mg/l	0.66	0.33	0.33	0.41
Ammonia	mg/l	11	12	11	12
Nitrogen, Kjeldahl	mg/l	11	13	12	12
Calcium	mg/l	65	110	110	110
Magnesium	mg/l	15	26	28	25
Sodium	mg/l	13	17	16	19
Potassium	mg/l	11	15	14	17
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	0.03	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	0.4	0.5	<0.1
Antimony	mg/l	<0.1	0.1	0.4	<0.1
Arsenic	mg/l	<0.001	0.002	0.001	<0.001
Barium	mg/l	0.03	0.03	0.04	0.04
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	<0.001	<0.001	0.007	0.002
Cobalt	mg/l	<0.01	<0.01	0.03	<0.01
Copper	mg/l	<0.01	<0.01	0.06	<0.01
Iron	mg/l	1.4	3.5	3.9	3.4
Lead	mg/l	<0.001	<0.001	<0.001	0.001
Manganese	mg/l	1.9	3.5	3.7	3.3
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	<0.01	0.01	0.02	<0.01

See footnotes at end of table.

Table B-13
Well FUB13
(Continued)

Parameters	Units	Sampling Location			
		11/14/90	1/30/91	4/22/91	8/6/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-13
Well FUB13
(Continued)

Parameters	Units	Sampling Location 11/14/90	1/30/91	4/22/91	8/6/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-13
Well FUB13
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/22/92	4/22/92	7/23/92
Groundwater Elevation	ft msl	5.00	4.82	4.98	5.14
Temperature	°C	17.2	13.0	14.5	15.3
pH	pH units	7.06	7.29	6.77	6.80
Specific Conductance @ 25°C	µmhos/cm	1100	900	950	900
Total Organic Carbon	mg/l	3	3	2	5.0
Alkalinity	mg/l $CaCO_3$	180	155	139	170
Chloride	mg/l	20	18	28	21
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	0.31
Sulfate	mg/l	250	300	250	270
Sulfide	mg/l	<0.1	1.1	<1	<1.0
Fluoride	mg/l	0.44	0.44	0.33	0.39
Ammonia	mg/l	11	10	8.2	8.4
Nitrogen, Kjeldahl	mg/l	5.8	9	9	35
Calcium	mg/l	110	110	110	100
Magnesium	mg/l	25	25	28	27
Sodium	mg/l	19	14	15	16
Potassium	mg/l	18	13	13	14
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.010
Phenolics, Total	mg/l	<0.01	0.03	0.05	0.26
Metals:					
Aluminum	mg/l	0.2	<0.1	0.5	<0.10
Antimony	mg/l	<0.1	<0.1	<0.1	<0.10
Arsenic	mg/l	<0.001	0.001	0.001	<0.001
Barium	mg/l	0.04	0.03	0.05	0.030
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.002	0.002	<0.001	<0.001
Cobalt	mg/l	<0.01	<0.01	0.03	<0.010
Copper	mg/l	0.01	0.02	<0.01	<0.010
Iron	mg/l	3.2	3.5	4	4.0
Lead	mg/l	<0.001	<0.001	<0.001	0.001
Manganese	mg/l	3.4	3.5	4	3.6
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	<0.040
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	0.001
Tin	mg/l	<0.1	<0.01	0.1	<0.10
Vanadium	mg/l	<0.1	<0.01	<0.1	<0.050
Zinc	mg/l	<0.01	0.03	0.02	<0.010

See footnotes at end of table.

Table B-13
Well FUB13
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/22/92	7/23/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-13
Well FUB13
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/22/92	4/22/92	7/23/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1) Dash denotes not analyzed.

Table B-14
Historical Groundwater Chemistry Data
Fairless Works
Well FUB14

Parameters	Units	Sampling Location			
		10/20/88	2/23/89	5/24/89	8/24/89
Groundwater Elevation	ft msl	5.50	6.16	7.79	6.60
Temperature	°C	20	10	15	18
pH	pH units	6.75	7.20	7.00	6.75
Specific Conductance @ 25°C	µmhos/cm	600	700	1100	800
Total Organic Carbon	mg/l	4	14	7	11
Alkalinity	mg/l $CaCO_3$	84	-(1)	140	76
Chloride	mg/l	25	24	26	24
Nitrate	mg/l NO_3-N	<0.1	-	<0.1	0.1
Sulfate	mg/l	82	-	350	290
Sulfide	mg/l	<0.1	<1	<0.1	<1
Fluoride	mg/l	0.18	0.29	0.14	0.26
Ammonia	mg/l	8.7	8.0	12	9.1
Nitrogen, Kjeldahl	mg/l	9	8.0	11	24
Calcium	mg/l	50	70	120	120
Magnesium	mg/l	12	16	31	31
Sodium	mg/l	16	13	18	19
Potassium	mg/l	8.4	7.3	9.2	9.2
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	0.01	<0.01	0.09
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.2	0.1
Antimony	mg/l	<0.1	2.5	<0.1	<0.1
Arsenic	mg/l	<0.001	0.005	0.004	0.004
Barium	mg/l	0.03	0.06	0.08	0.11
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.003	<0.001	0.031	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.02	<0.01	<0.01	0.01
Iron	mg/l	0.1	1.5	2.2	0.6
Lead	mg/l	<0.001	<0.001	0.007	<0.001
Manganese	mg/l	2.5	3.8	0.72	6.8
Mercury	mg/l	0.0048	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.2
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	0.002	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.03	0.02	1.8	<0.01

See footnotes at end of table.

Table B-14
Well FUB14
(Continued)

Parameters	Units	Sampling Location			
		10/20/88	2/23/89	5/24/89	8/24/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	71
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	14	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	<10	<10	-	-

See footnotes at end of table.

Table B-14
Well FUB14
(Continued)

Parameters	Units	Sampling Location 10/20/88	2/23/89	5/24/89	8/24/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	12	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	<10	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table B-14
Well FUB14
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/22/90	8/15/90
Groundwater Elevation	ft msl	6.43	6.47	6.56	6.18
Temperature	°C	18	13	14	23
pH	pH units	6.90	6.80	7.00	6.55
Specific Conductance @ 25°C	µmhos/cm	850	850	900	600
Total Organic Carbon	mg/l	31	6	6	10
Alkalinity	mg/l $CaCO_3$	120	138	137	116
Chloride	mg/l	17	23	22	21
Nitrate	mg/l NO_3-N	<0.1	<0.1	0.1	0.2
Sulfate	mg/l	250	280	300	240
Sulfide	mg/l	<1	2	<1	<1
Fluoride	mg/l	0.14	0.27	0.26	0.36
Ammonia	mg/l	11	7.8	7.0	6.6
Nitrogen, Kjeldahl	mg/l	11	7.8	7.0	7.2
Calcium	mg/l	99	110	93	79
Magnesium	mg/l	22	24	21	16
Sodium	mg/l	13	15	14	14
Potassium	mg/l	10	13	12	11
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	<0.01	0.02	0.06
Metals:					
Aluminum	mg/l	0.2	<0.1	<0.1	<0.1
Antimony	mg/l	0.2	<0.1	<0.1	<0.1
Arsenic	mg/l	0.005	0.005	0.005	0.007
Barium	mg/l	0.20	0.12	0.11	0.08
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	0.001	0.002	<0.001	0.002
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	<0.01	0.01	<0.01	<0.01
Iron	mg/l	1.1	2.5	2.1	2.1
Lead	mg/l	<0.001	<0.001	<0.001	<0.001
Manganese	mg/l	6.5	5.4	4.2	3.3
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	0.004	<0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.04	<0.01	0.01	0.11

See footnotes at end of table.

Table B-14
Well FUB14
(Continued)

Parameters	Units	Sampling Location			
		11/15/89	2/14/90	5/22/90	8/15/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-14
Well FUB14
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/22/90	8/15/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	50	-	-	11
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	15	-	-	12
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-14
Well FUB14
(Continued)

Parameters	Units	Sampling Location 11/14/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	5.50	6.16	5.47	5.00
Temperature	°C	17	17	12	17.8
pH	pH units	6.95	6.70	6.75	6.93
Specific Conductance @ 25°C	µmhos/cm	500	800	850	1100
Total Organic Carbon	mg/l	4	5	4	9
Alkalinity	mg/l $CaCO_3$	84	110	113	136
Chloride	mg/l	20	22	23	22
Nitrate	mg/l NO_3-N	<0.1	0.4	<0.1	0.2
Sulfate	mg/l	110	270	370	340
Sulfide	mg/l	2	<1	<1	2.9
Fluoride	mg/l	0.59	0.21	0.33	0.26
Ammonia	mg/l	4.3	5.4	5.3	6.7
Nitrogen, Kjeldahl	mg/l	5.0	7.1	7	11
Calcium	mg/l	44	97	120	110
Magnesium	mg/l	10	22	26	24
Sodium	mg/l	11	15	15	19
Potassium	mg/l	7.7	11	12	15
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	<0.01	0.02	0.01
Metals:					
Aluminum	mg/l	<0.1	0.5	0.4	<0.1
Antimony	mg/l	<0.1	0.1	0.4	<0.1
Arsenic	mg/l	0.006	0.005	0.003	0.002
Barium	mg/l	0.04	0.08	0.11	0.09
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	<0.001	<0.001	0.004	<0.001
Cobalt	mg/l	<0.01	<0.01	0.03	<0.01
Copper	mg/l	<0.01	<0.01	0.06	0.02
Iron	mg/l	0.9	2.4	3.1	1.8
Lead	mg/l	<0.001	<0.001	<0.001	<0.001
Manganese	mg/l	1.7	4.2	4.9	4.5
Mercury	mg/l	<0.0005	0.0006	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	0.02	0.02	0.02	0.01

See footnotes at end of table.

Table B-14
Well FUB14
(Continued)

Parameters	Units	Sampling Location			
		11/14/90	1/30/91	4/22/91	8/7/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-14
Well FUB14
(Continued)

Parameters	Units	Sampling Location 11/14/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-14
Well FUB14
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/22/92	7/23/92
Groundwater Elevation	ft msl	4.89	4.62	4.84	5.00
Temperature	°C	14.7	11.1	13.4	14.8
pH	pH units	6.71	6.63	6.64	6.50
Specific Conductance @ 25°C	µmhos/cm	1100	800	850	800
Total Organic Carbon	mg/l	4	5	3	8.0
Alkalinity	mg/l $CaCO_3$	150	136	112	141
Chloride	mg/l	19	17	27	22
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.10
Sulfate	mg/l	250	290	230	250
Sulfide	mg/l	3.8	<0.1	<1	<1.0
Fluoride	mg/l	0.27	0.25	0.27	0.23
Ammonia	mg/l	6.0	5.1	4.8	5.0
Nitrogen, Kjeldahl	mg/l	4.3	6	5	33
Calcium	mg/l	110	110	100	98
Magnesium	mg/l	24	23	24	24
Sodium	mg/l	18	13	13	15
Potassium	mg/l	17	13	12	14
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.010
Phenolics, Total	mg/l	<0.01	0.03	0.09	0.091
Metals:					
Aluminum	mg/l	0.2	<0.1	0.4	<0.10
Antimony	mg/l	<0.1	<0.1	<0.1	<0.10
Arsenic	mg/l	<0.001	0.003	0.003	0.002
Barium	mg/l	0.10	0.010	0.09	0.080
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.002	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.01	0.01	0.02	<0.010
Copper	mg/l	0.01	0.01	<0.01	<0.010
Iron	mg/l	2.2	2.0	2	1.7
Lead	mg/l	<0.001	0.002	<0.001	0.001
Manganese	mg/l	4.6	4.4	5	4.2
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	<0.040
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	0.02	0.03	0.02	<0.010

See footnotes at end of table.

Table B-14
Well FUB14
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/22/92	7/23/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-14
Well FUB14
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/22/92	4/22/92	7/23/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1)Dash denotes not analyzed.

Table B-15
Historical Groundwater Chemistry Data
Fairless Works
Well FUB15D

Parameters	Units	Sampling Location			
		10/20/88	2/23/89	5/24/89	8/23/89
Groundwater Elevation	ft msl	4.28	5.68	6.85	6.34
Temperature	°C	14	10	15	18
pH	pH units	6.95	7.10	6.80	7.15
Specific Conductance @ 25°C	µmhos/cm	145	160	150	140
Total Organic Carbon	mg/l	<1	5	2	2
Alkalinity	mg/l $CaCO_3$	36	.(1)	36	32
Chloride	mg/l	8.1	8.0	6.5	30
Nitrate	mg/l NO_3-N	0.4	-	<0.1	<0.1
Sulfate	mg/l	24	-	16	21
Sulfide	mg/l	<0.1	<1	<0.1	<1
Fluoride	mg/l	0.04	0.11	0.04	0.07
Ammonia	mg/l	0.3	<0.1	0.2	<0.1
Nitrogen, Kjeldahl	mg/l	1.3	0.2	<0.1	<1
Calcium	mg/l	12	12	11	10
Magnesium	mg/l	2.2	2.5	3	3
Sodium	mg/l	10	8	8	8
Potassium	mg/l	3.8	2.5	2.4	2.3
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	0.02
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.2	0.1
Antimony	mg/l	<0.1	1.3	<0.1	<0.1
Arsenic	mg/l	0.006	0.001	<0.001	<0.001
Barium	mg/l	0.02	0.05	0.14	0.06
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.004	0.001	<0.001	0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.01	<0.01	<0.01	<0.01
Iron	mg/l	2.2	2.9	4.2	6.9
Lead	mg/l	0.001	<0.001	0.008	<0.001
Manganese	mg/l	0.20	0.20	0.21	0.20
Mercury	mg/l	0.0009	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.3
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	0.004	0.002
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.02	0.02	0.02	<0.01

See footnotes at end of table.

Table B-15
Well FUB15D
(Continued)

Parameters	Units	Sampling Location			
		10/20/88	2/23/89	5/24/89	8/23/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	70
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	<10	210	-	-

See footnotes at end of table.

Table B-15
Well FUB15D
(Continued)

Parameters	Units	Sampling Location 10/20/88	2/23/89	5/24/89	8/23/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	12	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	<10	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table B-15
Well FUB15D
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/22/90	8/15/90
Groundwater Elevation	ft msl	5.80	5.64	5.65	5.48
Temperature	°C	18	14	14	17
pH	pH units	6.65	7.05	7.00	6.70
Specific Conductance @ 25°C	µmhos/cm	160	140	150	140
Total Organic Carbon	mg/l	11	2	2	2
Alkalinity	mg/l $CaCO_3$	57	39	50	38
Chloride	mg/l	6.4	6.6	6.6	5.5
Nitrate	mg/l NO_3-N	<0.1	<0.1	0.2	<0.1
Sulfate	mg/l	30	16	30	10
Sulfide	mg/l	<1	2	<1	<1
Fluoride	mg/l	0.04	0.28	0.18	0.09
Ammonia	mg/l	<0.1	<0.1	<0.1	0.3
Nitrogen, Kjeldahl	mg/l	1.0	<0.1	0.4	1.4
Calcium	mg/l	11	11	9	9
Magnesium	mg/l	2	3	2	2
Sodium	mg/l	7	7	7	7
Potassium	mg/l	2.2	3.3	0.6	2.4
Cyanide	mg/l	0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	0.02	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	<0.1	<0.1	<0.1
Antimony	mg/l	<0.1	<0.1	<0.1	<0.1
Arsenic	mg/l	0.002	<0.001	0.002	0.002
Barium	mg/l	0.09	0.06	0.06	0.06
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	0.001	<0.001	<0.001
Chromium	mg/l	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	<0.01	<0.01	<0.01	<0.01
Iron	mg/l	7.6	6.6	6.0	5.7
Lead	mg/l	<0.001	<0.001	<0.001	<0.001
Manganese	mg/l	0.14	0.21	0.14	0.13
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	0.001	<0.001	0.003	0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.02	<0.01	<0.01	<0.01

See footnotes at end of table.

Table B-15
Well FUB15D
(Continued)

Parameters	Units	Sampling Location			
		11/15/89	2/14/90	5/22/90	8/15/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	10	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-15
Well FUB15D
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/22/90	8/15/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	45	-	-	<10
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	13	-	-	<10
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-15
Well FUB15D
(Continued)

Parameters	Units	Sampling Location 11/14/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	4.83	5.43	4.97	4.54
Temperature	°C	17	16	14	17.0
pH	pH units	6.95	7.05	6.45	6.60
Specific Conductance @ 25°C	µmhos/cm	140	100	135	180
Total Organic Carbon	mg/l	3	3	1	2
Alkalinity	mg/l $CaCO_3$	40	40	42	36
Chloride	mg/l	6.7	6.5	6.8	6.7
Nitrate	mg/l NO_3-N	<0.1	0.2	<0.1	<0.1
Sulfate	mg/l	24	13	12	15
Sulfide	mg/l	<1	<1	<1	0.1
Fluoride	mg/l	0.10	0.07	0.08	0.11
Ammonia	mg/l	0.2	0.2	0.1	0.2
Nitrogen, Kjeldahl	mg/l	1.2	3.8	<1	1.7
Calcium	mg/l	9	10	11	10
Magnesium	mg/l	2	2	3	2
Sodium	mg/l	7	8	8	7
Potassium	mg/l	3.0	2.6	3.2	3.1
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	<0.01	<0.01	0.02
Metals:					
Aluminum	mg/l	<0.1	0.5	0.4	<0.1
Antimony	mg/l	<0.1	0.1	0.2	<0.1
Arsenic	mg/l	<0.001	0.002	0.002	0.001
Barium	mg/l	0.06	0.05	0.08	0.06
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.001	<0.001	0.006	<0.001
Cobalt	mg/l	<0.01	<0.01	0.02	<0.01
Copper	mg/l	<0.01	<0.01	0.04	<0.01
Iron	mg/l	6.3	6.1	8.0	6.3
Lead	mg/l	<0.001	<0.001	0.002	<0.001
Manganese	mg/l	0.13	0.16	0.17	0.14
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	0.002	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	<0.01	0.01	0.01	0.01

See footnotes at end of table.

Table B-15
Well FUB15D
(Continued)

Parameters	Units	Sampling Location			
		11/14/90	1/30/91	4/22/91	8/7/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-15
Well FUB15D
(Continued)

Parameters	Units	Sampling Location 11/14/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-15
Well FUB15D
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/22/92	7/22/92
Groundwater Elevation	ft msl	4.36	4.16	4.37	4.46
Temperature	°C	14.9	12.0	NS(2)	NS
pH	pH units	5.87	6.44	NS	NS
Specific Conductance @ 25°C	µmhos/cm	300	140	NS	NS
Total Organic Carbon	mg/l	1	1	NS	NS
Alkalinity	mg/l $CaCO_3$	100	45	NS	NS
Chloride	mg/l	6.2	6.4	NS	NS
Nitrate	mg/l NO_3-N	<0.1	<0.1	NS	NS
Sulfate	mg/l	11	10	NS	NS
Sulfide	mg/l	0.2	1.2	NS	NS
Fluoride	mg/l	0.09	0.10	NS	NS
Ammonia	mg/l	0.1	0.1	NS	NS
Nitrogen, Kjeldahl	mg/l	<0.1	4	NS	NS
Calcium	mg/l	11	10	NS	NS
Magnesium	mg/l	3	2	NS	NS
Sodium	mg/l	11	7	NS	NS
Potassium	mg/l	5.1	2.8	NS	NS
Cyanide	mg/l	<0.01	<0.01	NS	NS
Phenolics, Total	mg/l	0.06	0.02	NS	NS
Metals:					
Aluminum	mg/l	0.1	<0.1	NS	NS
Antimony	mg/l	<0.1	<0.1	NS	NS
Arsenic	mg/l	0.002	<0.001	NS	NS
Barium	mg/l	0.06	0.06	NS	NS
Beryllium	mg/l	<0.005	<0.005	NS	NS
Cadmium	mg/l	<0.001	<0.001	NS	NS
Chromium	mg/l	0.001	<0.001	NS	NS
Cobalt	mg/l	<0.01	<0.01	NS	NS
Copper	mg/l	<0.01	0.02	NS	NS
Iron	mg/l	6.8	6.5	NS	NS
Lead	mg/l	<0.001	<0.001	NS	NS
Manganese	mg/l	0.15	0.15	NS	NS
Mercury	mg/l	0.0007	<0.0005	NS	NS
Nickel	mg/l	<0.1	<0.1	NS	NS
Osmium	mg/l	<1	<1	NS	NS
Selenium	mg/l	<0.001	<0.001	NS	NS
Silver	mg/l	<0.001	<0.001	NS	NS
Thallium	mg/l	<0.001	<0.001	NS	NS
Tin	mg/l	<0.1	<0.1	NS	NS
Vanadium	mg/l	<0.1	<0.1	NS	NS
Zinc	mg/l	0.01	0.02	NS	NS

See footnotes at end of table.

Table B-15
Well FUB15D
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/22/92	7/22/92
Volatiles:					
Acrolein	µg/l	<250	<250	NS	NS
Acrylonitrile	µg/l	<250	<250	NS	NS
Benzene	µg/l	<5	<5	NS	NS
Carbon Tetrachloride	µg/l	<5	<5	NS	NS
Chlorobenzene	µg/l	<5	<5	NS	NS
1,2-Dichloroethane	µg/l	<5	<5	NS	NS
1,1,1-Trichloroethane	µg/l	<5	<5	NS	NS
1,1-Dichloroethane	µg/l	<5	<5	NS	NS
1,1,2-Trichloroethane	µg/l	<5	<5	NS	NS
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	NS	NS
Chloroethane	µg/l	<10	<10	NS	NS
2-Chloroethylvinyl Ether	µg/l	<10	<10	NS	NS
Chloroform	µg/l	<5	<5	NS	NS
1,1-Dichloroethene	µg/l	<5	<5	NS	NS
Trans-1,2-Dichloroethene	µg/l	<5	<5	NS	NS
1,2-Dichloropropane	µg/l	<5	<5	NS	NS
1,3-Dichloropropene	µg/l	<5	<5	NS	NS
Ethylbenzene	µg/l	<5	<5	NS	NS
Methylene Chloride	µg/l	<5	<5	NS	NS
Chloromethane	µg/l	<10	<10	NS	NS
Bromomethane	µg/l	<10	<10	NS	NS
Bromoform	µg/l	<5	<5	NS	NS
Bromodichloromethane	µg/l	<5	<5	NS	NS
Dibromochloromethane	µg/l	<5	<5	NS	NS
Tetrachloroethene	µg/l	<5	<5	NS	NS
Toluene	µg/l	<5	<5	NS	NS
Trichloroethene	µg/l	<5	<5	NS	NS
Vinyl Chloride	µg/l	<10	<10	NS	NS
Acetone	µg/l	-	-	-	NS

See footnotes at end of table.

Table B-15
Well FUB15D
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/22/92	4/22/92	7/22/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	NS
Benzidine	µg/l	-	-	-	NS
1,2,4-Trichlorobenzene	µg/l	-	-	-	NS
Hexachlorobenzene	µg/l	-	-	-	NS
Hexachloroethane	µg/l	-	-	-	NS
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	NS
2-Chloronaphthalene	µg/l	-	-	-	NS
1,2-Dichlorobenzene	µg/l	-	-	-	NS
1,3-Dichlorobenzene	µg/l	-	-	-	NS
1,4-Dichlorobenzene	µg/l	-	-	-	NS
3,3-Dichlorobenzidine	µg/l	-	-	-	NS
2,4-Dinitrotoluene	µg/l	-	-	-	NS
2,6-Dinitrotoluene	µg/l	-	-	-	NS
Fluoranthene	µg/l	-	-	-	NS
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	NS
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	NS
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	NS
Bis(2-Chloroethyl)ether	µg/l	-	-	-	NS
Hexachlorobutadiene	µg/l	-	-	-	NS
Hexachlorocyclopentadiene	µg/l	-	-	-	NS
Isophorone	µg/l	-	-	-	NS
Naphthalene	µg/l	-	-	-	NS
Nitrobenzene	µg/l	-	-	-	NS
N-Nitrosodimethylamine	µg/l	-	-	-	NS
N-Nitrosodiphenylamine	µg/l	-	-	-	NS
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	NS
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	NS
Butyl Benzyl Phthalate	µg/l	-	-	-	NS
Di-n-Butyl Phthalate	µg/l	-	-	-	NS
Di-n-Octyl Phthalate	µg/l	-	-	-	NS
Diethyl Phthalate	µg/l	-	-	-	NS
Dimethyl Phthalate	µg/l	-	-	-	NS
Benzo(a)Anthracene	µg/l	-	-	-	NS
Benzo(a)Pyrene	µg/l	-	-	-	NS
Benzo(b)Fluoranthene	µg/l	-	-	-	NS
Benzo(k)Fluoranthene	µg/l	-	-	-	NS
Chrysene	µg/l	-	-	-	NS
Acenaphthylene	µg/l	-	-	-	NS
Anthracene	µg/l	-	-	-	NS
Benzo(g,h,i)Perylene	µg/l	-	-	-	NS
Fluorene	µg/l	-	-	-	NS
Phenanthrene	µg/l	-	-	-	NS
Dibenzo(ah)Anthracene	µg/l	-	-	-	NS
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	NS
Pyrene	µg/l	-	-	-	NS
Polychlorinated Biphenyls	µg/l	-	-	-	NS

(1) Dash denotes not analyzed.
(2) NS = Not sampled due to well casing blockage.

Table B-16
Historical Groundwater Chemistry Data
Fairless Works
Well FUB16

Parameters	Units	Sampling Location			
		10/20/88	2/24/89	5/24/89	8/23/89
Groundwater Elevation	ft msl	5.38	5.98	7.48	6.45
Temperature	°C	20	9	17	22
pH	pH units	6.65	7.05	7.20	6.75
Specific Conductance @ 25°C	µmhos/cm	390	460	800	1000
Total Organic Carbon	mg/l	2	2	11	4
Alkalinity	mg/l $CaCO_3$	76	.(1)	104	56
Chloride	mg/l	19	20	26	25
Nitrate	mg/l NO_3-N	0.2	-	<0.1	0.4
Sulfate	mg/l	31	-	220	350
Sulfide	mg/l	<0.1	<1	0.8	<1
Fluoride	mg/l	0.14	0.33	0.15	0.15
Ammonia	mg/l	5.2	4.6	7.3	11
Nitrogen, Kjeldahl	mg/l	5.2	4.6	7.0	23
Calcium	mg/l	35	41	86	140
Magnesium	mg/l	7.2	9.4	20	31
Sodium	mg/l	12	10	16	20
Potassium	mg/l	7.4	5.1	7.2	10
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	0.01	0.02	<0.01	<0.01
Metals:					
Aluminum	mg/l	<0.1	<0.1	0.1	0.2
Antimony	mg/l	<0.1	1.0	<0.1	<0.1
Arsenic	mg/l	0.001	0.001	<0.001	0.002
Barium	mg/l	0.01	0.05	0.14	0.20
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.004	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.1
Copper	mg/l	0.02	<0.01	<0.01	0.01
Iron	mg/l	<0.1	0.2	1.4	2.6
Lead	mg/l	<0.001	<0.001	0.003	<0.001
Manganese	mg/l	2.1	2.5	0.75	11
Mercury	mg/l	0.0014	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	0.2
Osmium	mg/l	<10	<0.1	<10	<20
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	0.003	<0.001
Tin	mg/l	<1	<1	<1	<1
Vanadium	mg/l	<1	<1	<1	<1
Zinc	mg/l	0.02	0.02	0.05	<0.01

See footnotes at end of table.

Table B-16
Well FUB16
(Continued)

Parameters	Units	Sampling Location			
		10/20/88	2/24/89	5/24/89	8/23/89
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	29	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	10	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<5
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	31	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<5
Bromomethane	µg/l	<5	<5	<5	<5
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<5
Acetone	µg/l	16000	<10	-	-

See footnotes at end of table.

Table B-16
Well FUB16
(Continued)

Parameters	Units	Sampling Location 10/20/88	2/24/89	5/24/89	8/23/89
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	-
Benzidine	µg/l	<50	-	-	-
1,2,4-Trichlorobenzene	µg/l	<10	-	-	-
Hexachlorobenzene	µg/l	<10	-	-	-
Hexachloroethane	µg/l	<10	-	-	-
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	-
2-Chloronaphthalene	µg/l	<10	-	-	-
1,2-Dichlorobenzene	µg/l	<10	-	-	-
1,3-Dichlorobenzene	µg/l	<10	-	-	-
1,4-Dichlorobenzene	µg/l	<10	-	-	-
3,3-Dichlorobenzidine	µg/l	<10	-	-	-
2,4-Dinitrotoluene	µg/l	<10	-	-	-
2,6-Dinitrotoluene	µg/l	<10	-	-	-
Fluoranthene	µg/l	<10	-	-	-
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	-
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	-
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	-
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	-
Hexachlorobutadiene	µg/l	<10	-	-	-
Hexachlorocyclopentadiene	µg/l	<10	-	-	-
Isophorone	µg/l	<10	-	-	-
Naphthalene	µg/l	<10	-	-	-
Nitrobenzene	µg/l	<10	-	-	-
N-Nitrosodimethylamine	µg/l	<10	-	-	-
N-Nitrosodiphenylamine	µg/l	<10	-	-	-
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	-
Bis(2-Ethylhexyl)phthalate	µg/l	53	-	-	-
Butyl Benzyl Phthalate	µg/l	<10	-	-	-
Di-n-Butyl Phthalate	µg/l	<10	-	-	-
Di-n-Octyl Phthalate	µg/l	<10	-	-	-
Diethyl Phthalate	µg/l	<10	-	-	-
Dimethyl Phthalate	µg/l	<10	-	-	-
Benzo(a)Anthracene	µg/l	<10	-	-	-
Benzo(a)Pyrene	µg/l	<10	-	-	-
Benzo(b)Fluoranthene	µg/l	<10	-	-	-
Benzo(k)Fluoranthene	µg/l	<10	-	-	-
Chrysene	µg/l	<10	-	-	-
Acenaphthylene	µg/l	<10	-	-	-
Anthracene	µg/l	<10	-	-	-
Benzo(g,h,i)Perylene	µg/l	<50	-	-	-
Fluorene	µg/l	<10	-	-	-
Phenanthrene	µg/l	<10	-	-	-
Dibenzo(ah)Anthracene	µg/l	<50	-	-	-
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	-
Pyrene	µg/l	<10	-	-	-
Polychlorinated Biphenyls	µg/l	<1	-	-	-

See footnotes at end of table.

Table B-16
Well FUB16
(Continued)

Parameters	Units	Sampling Location			
		11/15/89	2/14/90	5/22/90	8/15/90
Groundwater Elevation	ft msl	6.19	5.96	6.44	6.01
Temperature	°C	17	12	14	21
pH	pH units	7.00	7.25	7.25	6.80
Specific Conductance @ 25°C	µmhos/cm	900	600	380	350
Total Organic Carbon	mg/l	17	3	6	2
Alkalinity	mg/l $CaCO_3$	150	116	87	100
Chloride	mg/l	19	20	19	17
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.1
Sulfate	mg/l	260	130	46	42
Sulfide	mg/l	<1	<1	<1	<1
Fluoride	mg/l	0.10	0.21	0.21	0.23
Ammonia	mg/l	9.8	7.2	4.0	4.0
Nitrogen, Kjeldahl	mg/l	11	7.2	4.3	4.3
Calcium	mg/l	130	58	29	34
Magnesium	mg/l	23	14	7	8
Sodium	mg/l	16	12	9	10
Potassium	mg/l	8.0	9.0	3.4	4.9
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01
Phenolics, Total	mg/l	<0.01	0.02	0.03	<0.01
Metals:					
Aluminum	mg/l	<0.1	<0.1	<0.1	<0.1
Antimony	mg/l	0.2	<0.1	<0.1	<0.1
Arsenic	mg/l	0.002	0.001	0.002	0.002
Barium	mg/l	0.35	0.07	0.04	0.04
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.001	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.1	<0.1	<0.1	<0.01
Copper	mg/l	<0.01	0.01	<0.01	<0.01
Iron	mg/l	2.4	1.0	0.6	0.9
Lead	mg/l	<0.001	<0.001	<0.001	0.001
Manganese	mg/l	9.0	4.8	2.3	2.8
Mercury	mg/l	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<10	<1	<1	<1
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	0.001	<0.001	<0.001	<0.001
Thallium	mg/l	<0.001	<0.001	0.003	<0.001
Tin	mg/l	<1	<1	<0.1	<0.1
Vanadium	mg/l	<1	<1	<0.1	<0.1
Zinc	mg/l	0.03	<0.01	<0.01	<0.01

See footnotes at end of table.

Table B-16
Well FUB16
(Continued)

Parameters	Units	Sampling Location			
		11/15/89	2/14/90	5/22/90	8/15/90
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	23	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<5	<5	<5	<10
2-Chloroethylvinyl Ether	µg/l	<5	<5	<5	<5
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<5	<5	<5	<10
Bromomethane	µg/l	<5	<5	<5	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<5	<5	<5	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-16
Well FUB16
(Continued)

Parameters	Units	Sampling Location 11/15/89	2/14/90	5/22/90	8/15/90
Base/Neutrals:					
Acenaphthene	µg/l	<10	-	-	<10
Benzidine	µg/l	<50	-	-	<50
1,2,4-Trichlorobenzene	µg/l	<10	-	-	<10
Hexachlorobenzene	µg/l	<10	-	-	<10
Hexachloroethane	µg/l	<10	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	<10	-	-	<10
2-Chloronaphthalene	µg/l	<10	-	-	<10
1,2-Dichlorobenzene	µg/l	<10	-	-	<10
1,3-Dichlorobenzene	µg/l	<10	-	-	<10
1,4-Dichlorobenzene	µg/l	<10	-	-	<10
3,3-Dichlorobenzidine	µg/l	<10	-	-	<20
2,4-Dinitrotoluene	µg/l	<10	-	-	<10
2,6-Dinitrotoluene	µg/l	<10	-	-	<10
Fluoranthene	µg/l	<10	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	<10	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	<10	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	<10	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	<10	-	-	<10
Hexachlorobutadiene	µg/l	<10	-	-	<10
Hexachlorocyclopentadiene	µg/l	<10	-	-	<10
Isophorone	µg/l	<10	-	-	<10
Naphthalene	µg/l	<10	-	-	<10
Nitrobenzene	µg/l	<10	-	-	<10
N-Nitrosodimethylamine	µg/l	<10	-	-	<10
N-Nitrosodiphenylamine	µg/l	<10	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	<10	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	45	-	-	<10
Butyl Benzyl Phthalate	µg/l	<10	-	-	<10
Di-n-Butyl Phthalate	µg/l	13	-	-	<10
Di-n-Octyl Phthalate	µg/l	<10	-	-	<10
Diethyl Phthalate	µg/l	<10	-	-	<10
Dimethyl Phthalate	µg/l	<10	-	-	<10
Benzo(a)Anthracene	µg/l	<10	-	-	<10
Benzo(a)Pyrene	µg/l	<10	-	-	<10
Benzo(b)Fluoranthene	µg/l	<10	-	-	<10
Benzo(k)Fluoranthene	µg/l	<10	-	-	<10
Chrysene	µg/l	<10	-	-	<10
Acenaphthylene	µg/l	<10	-	-	<10
Anthracene	µg/l	<10	-	-	<10
Benzo(g,h,i)Perylene	µg/l	<50	-	-	<10
Fluorene	µg/l	<10	-	-	<10
Phenanthrene	µg/l	<10	-	-	<10
Dibenzo(ah)Anthracene	µg/l	<50	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	<50	-	-	<10
Pyrene	µg/l	<10	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-16
Well FUB16
(Continued)

Parameters	Units	Sampling Location 11/14/90	1/30/91	4/22/91	8/7/91
Groundwater Elevation	ft msl	5.37	5.97	5.26	4.81
Temperature	°C	12	16	14	16.6
pH	pH units	7.25	7.30	7.00	7.08
Specific Conductance @ 25°C	µmhos/cm	390	300	650	1100
Total Organic Carbon	mg/l	2	11	2	3
Alkalinity	mg/l $CaCO_3$	91	93	86	113
Chloride	mg/l	19	17	26	25
Nitrate	mg/l NO_3-N	<0.1	0.2	<0.1	<0.1
Sulfate	mg/l	34	50	260	350
Sulfide	mg/l	<1	<1	<1	1.5
Fluoride	mg/l	0.34	0.18	0.14	0.15
Ammonia	mg/l	4.3	3.8	4.8	6.4
Nitrogen, Kjeldahl	mg/l	5.1	6.2	5	6.6
Calcium	mg/l	33	31	84	100
Magnesium	mg/l	9	8	22	25
Sodium	mg/l	10	10	14	19
Potassium	mg/l	6.0	4.8	7.0	9.6
Cyanide	mg/l	<0.01	<0.01	<0.01	0.02
Phenolics, Total	mg/l	<0.01	<0.01	0.06	<0.01
Metals:					
Aluminum	mg/l	<0.1	0.5	0.4	0.2
Antimony	mg/l	<0.1	0.1	0.3	<0.1
Arsenic	mg/l	<0.001	0.003	0.001	0.001
Barium	mg/l	0.04	0.02	0.08	0.09
Beryllium	mg/l	<0.01	<0.01	<0.01	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	<0.001	<0.001	0.003	<0.001
Cobalt	mg/l	<0.01	<0.01	0.01	<0.01
Copper	mg/l	<0.01	<0.01	0.04	<0.01
Iron	mg/l	0.2	0.5	1.7	2.7
Lead	mg/l	0.003	<0.001	0.001	0.002
Manganese	mg/l	2.8	2.5	6.8	7.7
Mercury	mg/l	<0.0005	<0.0005	<0.0005	0.0006
Nickel	mg/l	<0.1	<0.1	<0.1	<0.1
Osmium	mg/l	<1	<1	<1	<10
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	0.001	<0.001	<0.001
Thallium	mg/l	<0.001	0.002	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.1
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.1
Zinc	mg/l	<0.01	<0.01	0.01	<0.01

See footnotes at end of table.

Table B-16
Well FUB16
(Continued)

Parameters	Units	Sampling Location			
		11/14/90	1/30/91	4/22/91	8/7/91
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-16
Well FUB16
(Continued)

Parameters	Units	Sampling Location 11/14/90	1/30/91	4/22/91	8/7/91
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<50
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<50
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<50
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

See footnotes at end of table.

Table B-16
Well FUB16
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/22/92	4/21/92	7/23/92
Groundwater Elevation	ft msl	4.76	4.47	4.63	4.88
Temperature	°C	16.0	13.7	15.1	15.2
pH	pH units	6.96	6.76	6.50	6.70
Specific Conductance @ 25°C	µmhos/cm	1200	900	900	900
Total Organic Carbon	mg/l	2	2	1	4.0
Alkalinity	mg/l $CaCO_3$	140	125	92	131
Chloride	mg/l	25	24	33	26
Nitrate	mg/l NO_3-N	<0.1	<0.1	<0.1	<0.10
Sulfate	mg/l	300	310	250	290
Sulfide	mg/l	<0.1	<0.1	<1	<1.0
Fluoride	mg/l	0.14	0.13	0.13	0.11
Ammonia	mg/l	6.6	6.9	6.3	6.0
Nitrogen, Kjeldahl	mg/l	3.3	9	7	40
Calcium	mg/l	120	130	110	100
Magnesium	mg/l	28	28	26	27
Sodium	mg/l	19	16	14	16
Potassium	mg/l	11	9.6	9	9.7
Cyanide	mg/l	<0.01	<0.01	0.03	<0.010
Phenolics, Total	mg/l	<0.01	0.02	0.13	0.017
Metals:					
Aluminum	mg/l	0.2	<0.1	0.5	<0.10
Antimony	mg/l	<0.1	<0.1	<0.1	<0.10
Arsenic	mg/l	0.007	0.001	0.001	0.001
Barium	mg/l	0.11	0.11	0.1	0.090
Beryllium	mg/l	<0.005	<0.005	<0.005	<0.005
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001
Chromium	mg/l	0.002	<0.001	<0.001	<0.001
Cobalt	mg/l	<0.01	0.01	0.03	0.010
Copper	mg/l	0.01	0.01	0.02	<0.010
Iron	mg/l	3.0	2.7	2	2.6
Lead	mg/l	<0.001	<0.001	<0.001	0.001
Manganese	mg/l	8.6	9.1	8	7.8
Mercury	mg/l	<0.0006	<0.0005	<0.0005	<0.0002
Nickel	mg/l	<0.1	<0.1	<0.1	<0.040
Osmium	mg/l	<1	<1	<1	<1.0
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001
Silver	mg/l	<0.001	<0.001	<0.001	<0.001
Thallium	mg/l	0.001	0.001	<0.001	<0.001
Tin	mg/l	<0.1	<0.1	<0.1	<0.10
Vanadium	mg/l	<0.1	<0.1	<0.1	<0.050
Zinc	mg/l	<0.01	0.03	0.01	<0.010

See footnotes at end of table.

Table B-16
Well FUB16
(Continued)

Parameters	Units	Sampling Location			
		10/28/91	1/22/92	4/21/92	7/23/92
Volatiles:					
Acrolein	µg/l	<250	<250	<250	<250
Acrylonitrile	µg/l	<250	<250	<250	<250
Benzene	µg/l	<5	<5	<5	<5
Carbon Tetrachloride	µg/l	<5	<5	<5	<5
Chlorobenzene	µg/l	<5	<5	<5	<5
1,2-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,1-Trichloroethane	µg/l	<5	<5	<5	<5
1,1-Dichloroethane	µg/l	<5	<5	<5	<5
1,1,2-Trichloroethane	µg/l	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	µg/l	<5	<5	<5	<5
Chloroethane	µg/l	<10	<10	<10	<10
2-Chloroethylvinyl Ether	µg/l	<10	<10	<10	<10
Chloroform	µg/l	<5	<5	<5	<5
1,1-Dichloroethene	µg/l	<5	<5	<5	<5
Trans-1,2-Dichloroethene	µg/l	<5	<5	<5	<5
1,2-Dichloropropane	µg/l	<5	<5	<5	<5
1,3-Dichloropropene	µg/l	<5	<5	<5	<5
Ethylbenzene	µg/l	<5	<5	<5	<5
Methylene Chloride	µg/l	<5	<5	<5	<5
Chloromethane	µg/l	<10	<10	<10	<10
Bromomethane	µg/l	<10	<10	<10	<10
Bromoform	µg/l	<5	<5	<5	<5
Bromodichloromethane	µg/l	<5	<5	<5	<5
Dibromochloromethane	µg/l	<5	<5	<5	<5
Tetrachloroethene	µg/l	<5	<5	<5	<5
Toluene	µg/l	<5	<5	<5	<5
Trichloroethene	µg/l	<5	<5	<5	<5
Vinyl Chloride	µg/l	<10	<10	<10	<10
Acetone	µg/l	-	-	-	-

See footnotes at end of table.

Table B-16
Well FUB16
(Continued)

Parameters	Units	Sampling Location 10/28/91	1/22/92	4/21/92	7/23/92
Base/Neutrals:					
Acenaphthene	µg/l	-	-	-	<10
Benzidine	µg/l	-	-	-	<50
1,2,4-Trichlorobenzene	µg/l	-	-	-	<10
Hexachlorobenzene	µg/l	-	-	-	<10
Hexachloroethane	µg/l	-	-	-	<10
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	<10
2-Chloronaphthalene	µg/l	-	-	-	<10
1,2-Dichlorobenzene	µg/l	-	-	-	<10
1,3-Dichlorobenzene	µg/l	-	-	-	<10
1,4-Dichlorobenzene	µg/l	-	-	-	<10
3,3-Dichlorobenzidine	µg/l	-	-	-	<10
2,4-Dinitrotoluene	µg/l	-	-	-	<10
2,6-Dinitrotoluene	µg/l	-	-	-	<10
Fluoranthene	µg/l	-	-	-	<10
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	<10
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	<10
Bis(2-Chloroisopropyl)ether	µg/l	-	-	-	<10
Bis(2-Chloroethyl)ether	µg/l	-	-	-	<10
Hexachlorobutadiene	µg/l	-	-	-	<10
Hexachlorocyclopentadiene	µg/l	-	-	-	<10
Isophorone	µg/l	-	-	-	<10
Naphthalene	µg/l	-	-	-	<10
Nitrobenzene	µg/l	-	-	-	<10
N-Nitrosodimethylamine	µg/l	-	-	-	<10
N-Nitrosodiphenylamine	µg/l	-	-	-	<10
N-Nitrosodi-N-Propylamine	µg/l	-	-	-	<10
Bis(2-Ethylhexyl)phthalate	µg/l	-	-	-	<10
Butyl Benzyl Phthalate	µg/l	-	-	-	<10
Di-n-Butyl Phthalate	µg/l	-	-	-	<10
Di-n-Octyl Phthalate	µg/l	-	-	-	<10
Diethyl Phthalate	µg/l	-	-	-	<10
Dimethyl Phthalate	µg/l	-	-	-	<10
Benzo(a)Anthracene	µg/l	-	-	-	<10
Benzo(a)Pyrene	µg/l	-	-	-	<10
Benzo(b)Fluoranthene	µg/l	-	-	-	<10
Benzo(k)Fluoranthene	µg/l	-	-	-	<10
Chrysene	µg/l	-	-	-	<10
Acenaphthylene	µg/l	-	-	-	<10
Anthracene	µg/l	-	-	-	<10
Benzo(g,h,i)Perylene	µg/l	-	-	-	<10
Fluorene	µg/l	-	-	-	<10
Phenanthrene	µg/l	-	-	-	<10
Dibenzo(ah)Anthracene	µg/l	-	-	-	<10
Indeno(1,2,3-cd)Pyrene	µg/l	-	-	-	<10
Pyrene	µg/l	-	-	-	<10
Polychlorinated Biphenyls	µg/l	-	-	-	<1

(1)Dash denotes not analyzed.

BCM

NORBEC ENVIRONMENTAL LTD.

MDS Laboratories

LABORATORY REPORT

INDUSTRIAL HYGIENE — ENVIRONMENTAL TESTING

- EPA/NVLAP 1262
- AIHA ACCREDITATION NO. 135
- NY DOH 10903
- PA DER 06-353
- NJ DEP 77678

CLIENT: NORBEC ENVIRONMENTAL, LTD.
603 Glenwood Street
Emmaus, PA 18049

Attn: L. Robitaille

SAMPLE #: 03-1591-26
SAMPLE DATE: 03-13-91
SAMPLE TIME: ----
SAMPLED BY: ----
RECEIVED BY: SC
DATE & TIME RECEIVED: 03-15-91 1445

PROJECT DESCRIPTION: US Steel tank removal
STATION :# 12 Water in pit

PURGEABLE HALOCARBONS--EPA METHOD 601/8010

PARAMETER	RESULTS	
1. Bromodichloromethane	< 5.00	ug/L
2. Bromoform	< 5.00	ug/L
3. Bromomethane	< 5.00	ug/L
4. Carbontetrachloride	< 5.00	ug/L
5. Chlorobenzene	< 5.00	ug/L
6. Chloroethane	< 5.00	ug/L
7. 2-chloroethylvinyl ether	< 5.00	ug/L
8. Chloroform	< 5.00	ug/L
9. Chloromethane	< 5.00	ug/L
10. Dibromochloromethane	< 5.00	ug/L
11. 1,2-dichlorobenzene	< 5.00	ug/L
12. 1,3-dichlorobenzene	< 5.00	ug/L
13. 1,4-dichlorobenzene	< 5.00	ug/L
14. Dichlorodifluoromethane	< 5.00	ug/L
15. 1,1-dichloroethane	< 5.00	ug/L
16. 1,2-dichloroethane	< 5.00	ug/L
17. 1,1-dichloroethene	< 5.00	ug/L
18. trans-1,2-dichloroethene	< 5.00	ug/L
19. 1,2-dichloropropane	< 5.00	ug/L
20. cis-1,3-dichloropropene	< 5.00	ug/L
21. trans-1,3-dicloropropene	< 5.00	ug/L
22. Methylene chloride	< 5.00	ug/L
23. 1,1,2,2-tetrachloroethane	< 5.00	ug/L
24. Tetrachloroethene	< 5.00	ug/L
25. 1,1,1-trichloroethane	< 5.00	ug/L
26. 1,1,2-trichloroethane	< 5.00	ug/L
27. Trichloroethene	< 5.00	ug/L
28. Trichlorofluoromethane	< 5.00	ug/L
29. Vinyl chloride	< 5.00	ug/L

Reviewed by: Craig R. Achenbach MED
Craig R. Achenbach
Laboratory Supervisor

4418 POTTSVILLE PIKE, READING, PENNSYLVANIA 19605 215-921-8833 FAX 215-921-9667

MDS Laboratories

LABORATORY REPORT

INDUSTRIAL HYGIENE ENVIRONMENTAL TESTING

- EPA/NVLAP 1262
- AIHA ACCREDITATION NO. 135
- NY DOH 10903
- PA DER 06-353
- NJ DEP 77678

CLIENT: NORBEC ENVIRONMENTAL, LTD.
603 Glenwood Street
Emmaus, PA 18049

Attn: L. Robitaille

SAMPLE #: 03-1591-26
SAMPLE DATE: 03-13-91
SAMPLE TIME: ----
SAMPLED BY: ----
RECEIVED BY: SC
DATE & TIME RECEIVED: 03-15-91 1445

PROJECT DESCRIPTION: US Steel tank removal
STATION :# 12 Water in pit

PURABLE AROMATICS -- EPA METHOD 602/8020

1. Benzene	< 5.00	ug/L
2. Chlorobenzene	< 5.00	ug/L
3. 1,2-Dichlorobenzene	< 5.00	ug/L
4. 1,3-Dichlorobenzene	< 5.00	ug/L
5. 1,4-Dichlorobenzene	< 5.00	ug/L
6. Ethylbenzene	< 5.00	ug/L
7. Toluene	< 5.00	ug/L
8. Xylenes	< 5.00	ug/L

Reviewed by: Craig R. Achenbach (ED)
Craig R. Achenbach
Laboratory Supervisor

4418 POTTSVILLE PIKE, READING, PENNSYLVANIA 19605 215-921-8833 FAX 215-921-9667

MDS Laboratories

LABORATORY REPORT

INDUSTRIAL HYGIENE ENVIRONMENTAL TESTING

• EPA/NVLAP 1262 • NY DOH 10903 • NJ DEP 77678
• AIHA ACCREDITATION NO. 135 • PA DER 06-353

CLIENT: NORBEC ENVIRONMENTAL, LTD.
1031 Rear Chestnut St.
Emmaus, PA 18049

Attn: L. Robitaille

SAMPLE #: 10-1091-04
SAMPLE DATE: 10-09-91
SAMPLE TIME: 1045
SAMPLED BY: ----
RECEIVED BY: GCO
DATE & TIME RECEIVED: 10-10-91 1400

PROJECT DESCRIPTION: Langenfelder USX Fairless Works
STATION :Wastewater OW-1

PURGEABLE HALOCARBONS--EPA METHOD 601/8010

PARAMETER	RESULTS
1. Bromodichloromethane	< 5.00 ug/L
2. Bromoform	< 5.00 ug/L
3. Bromomethane	< 5.00 ug/L
4. Carbontetrachloride	< 5.00 ug/L
5. Chlorobenzene	< 5.00 ug/L
6. Chloroethane	< 5.00 ug/L
7. 2-chloroethylvinyl ether	< 5.00 ug/L
8. Chloroform	< 5.00 ug/L
9. Chloromethane	< 5.00 ug/L
10. Dibromochloromethane	< 5.00 ug/L
11. 1,2-dichlorobenzene	< 5.00 ug/L
12. 1,3-dichlorobenzene	< 5.00 ug/L
13. 1,4-dichlorobenzene	< 5.00 ug/L
14. Dichlorodifluoromethane	< 5.00 ug/L
15. 1,1-dichloroethane	< 5.00 ug/L
16. 1,2-dichloroethane	< 5.00 ug/L
17. 1,1-dichloroethene	< 5.00 ug/L
18. trans-1,2-dichloroethene	< 5.00 ug/L
19. 1,2-dichloropropane	< 5.00 ug/L
20. cis-1,3-dichloropropene	< 5.00 ug/L
21. trans-1,3-dicloropropene	< 5.00 ug/L
22. Methylene chloride	< 5.00 ug/L
23. 1,1,2,2-tetrachloroethane	< 5.00 ug/L
24. Tetrachloroethene	< 5.00 ug/L
25. 1,1,1-trichloroethane	< 5.00 ug/L
26. 1,1,2-trichloroethane	< 5.00 ug/L
27. Trichloroethene	< 5.00 ug/L
28. Trichlorofluoromethane	< 5.00 ug/L
29. Vinyl chloride	< 5.00 ug/L

Reviewed by: _____
Craig R. Achenbach
Laboratory Supervisor

4418 POTTSVILLE PIKE, READING, PENNSYLVANIA 19605 215-921-8833 FAX 215-921-9667

MDS Laboratories

LABORATORY REPORT

INDUSTRIAL HYGIENE ENVIRONMENTAL TESTING

• EPA/NVLAP 1262 • NY DOH 10903 • NJ DEP 77678
• AIHA ACCREDITATION NO. 135 • PA DER 06-353

CLIENT: NORBEC ENVIRONMENTAL, LTD.
1031 Rear Chestnut St.
Emmaus, PA 18049

Attn: L. Robitaille

SAMPLE #: 10-1091-04
SAMPLE DATE: 10-09-91
SAMPLE TIME: 1045
SAMPLED BY: ----
RECEIVED BY: GCO
DATE & TIME RECEIVED: 10-10-91 1400

PROJECT DESCRIPTION: Langenfelder USX Fairless Works
STATION :Wastewater OW - 1

PURABLE AROMATICS -- EPA METHOD 602/8020

1. Benzene	< 5.00	ug/L
2. Chlorobenzene	< 5.00	ug/L
3. 1,2-Dichlorobenzene	< 5.00	ug/L
4. 1,3-Dichlorobenzene	< 5.00	ug/L
5. 1,4-Dichlorobenzene	< 5.00	ug/L
6. Ethylbenzene	< 5.00	ug/L
7. Toluene	< 5.00	ug/L
8. Xylenes	< 5.00	ug/L

Reviewed by: _____
Craig R. Achenbach
Laboratory Supervisor

4418 POTTSVILLE PIKE, READING, PENNSYLVANIA 19605 215-921-8833 FAX 215-921-9667

MDS Laboratories

LABORATORY REPORT

INDUSTRIAL HYGIENE **ENVIRONMENTAL TESTING**

• EPA/NVLAP 1262 • NY DOH 10903 • NJ DEP 77678
• AIHA ACCREDITATION NO. 135 • PA DER 06-353

CLIENT: NORBEC ENVIRONMENTAL, LTD.
1031 Rear Chestnut St.
Emmaus, PA 18049

Attn: L. Robitaille

SAMPLE #: 10-1091-05
SAMPLE DATE: 10-09-91
SAMPLE TIME: 1000
SAMPLED BY: ----
RECEIVED BY: GCO
DATE & TIME RECEIVED: 10-10-91 1400

PROJECT DESCRIPTION: Langenfelder USX Fairless Works
STATION :Wastewater OW-2

PURGEABLE HALOCARBONS--EPA METHOD 601/8010

PARAMETER	RESULTS
1. Bromodichloromethane	< 5.00 ug/L
2. Bromoform	< 5.00 ug/L
3. Bromomethane	< 5.00 ug/L
4. Carbontetrachloride	< 5.00 ug/L
5. Chlorobenzene	< 5.00 ug/L
6. Chloroethane	< 5.00 ug/L
7. 2-chloroethylvinyl ether	< 5.00 ug/L
8. Chloroform	< 5.00 ug/L
9. Chloromethane	< 5.00 ug/L
10. Dibromochloromethane	< 5.00 ug/L
11. 1,2-dichlorobenzene	< 5.00 ug/L
12. 1,3-dichlorobenzene	< 5.00 ug/L
13. 1,4-dichlorobenzene	< 5.00 ug/L
14. Dichlorodifluoromethane	< 5.00 ug/L
15. 1,1-dichloroethane	< 5.00 ug/L
16. 1,2-dichloroethane	< 5.00 ug/L
17. 1,1-dichloroethene	< 5.00 ug/L
18. trans-1,2-dichloroethene	< 5.00 ug/L
19. 1,2-dichloropropane	< 5.00 ug/L
20. cis-1,3-dichloropropene	< 5.00 ug/L
21. trans-1,3-dicloropropene	< 5.00 ug/L
22. Methylene chloride	< 5.00 ug/L
23. 1,1,2,2-tetrachloroethane	< 5.00 ug/L
24. Tetrachloroethene	< 5.00 ug/L
25. 1,1,1-trichloroethane	< 5.00 ug/L
26. 1,1,2-trichloroethane	< 5.00 ug/L
27. Trichloroethene	< 5.00 ug/L
28. Trichlorofluoromethane	< 5.00 ug/L
29. Vinyl chloride	< 5.00 ug/L

Reviewed by: _____
Craig R. Achenbach
Laboratory Supervisor

4418 POTTSVILLE PIKE, READING, PENNSYLVANIA 19605 215-921-8833 FAX 215-921-9667

MDS Laboratories

LABORATORY REPORT

INDUSTRIAL HYGIENE **ENVIRONMENTAL TESTING**

- EPA/NVLAP 1262
- AIHA ACCREDITATION NO. 135
- NY DOH 10903
- PA DER 06-353
- NJ DEP 77678

CLIENT: NORBEC ENVIRONMENTAL, LTD.
1031 Rear Chestnut St.
Emmaus, PA 18049

Attn: L. Robitaille

SAMPLE #: 10-1091-05
SAMPLE DATE: 10-09-91
SAMPLE TIME: 1000
SAMPLED BY: ----
RECEIVED BY: GCO
DATE & TIME RECEIVED: 10-10-91 1400

PROJECT DESCRIPTION: Langenfelder USX Fairless Works
STATION :Wastewater OW - 2

PURABLE AROMATICS -- EPA METHOD 602/8020

1. Benzene	< 5.00	ug/L
2. Chlorobenzene	< 5.00	ug/L
3. 1,2-Dichlorobenzene	< 5.00	ug/L
4. 1,3-Dichlorobenzene	< 5.00	ug/L
5. 1,4-Dichlorobenzene	< 5.00	ug/L
6. Ethylbenzene	< 5.00	ug/L
7. Toluene	< 5.00	ug/L
8. Xylenes	< 5.00	ug/L

Reviewed by: _____
Craig R. Achenbach
Laboratory Supervisor

4418 POTTSVILLE PIKE, READING, PENNSYLVANIA 19605 215-921-8833 FAX 215-921-9667

MDS Laboratories

LABORATORY REPORT

INDUSTRIAL HYGIENE **ENVIRONMENTAL TESTING**

- EPA/NVLAP 1262
- AIHA ACCREDITATION NO. 135
- NY DOH 10903
- PA DER 06-353
- NJ DEP 77678

CLIENT: NORBEC ENVIRONMENTAL, LTD.
1031 Rear Chestnut St.
Emmaus, PA 18049

Attn: L. Robitaille

SAMPLE #: 10-1091-06
SAMPLE DATE: 10-09-91
SAMPLE TIME: 1035
SAMPLED BY: ----
RECEIVED BY: GCO
DATE & TIME RECEIVED: 10-10-91 1400

PROJECT DESCRIPTION: Langenfelder USX Fairless Works
STATION :Wastewater OW-3

PURGEABLE HALOCARBONS--EPA METHOD 601/8010

PARAMETER	RESULTS
1. Bromodichloromethane	< 5.00 ug/L
2. Bromoform	< 5.00 ug/L
3. Bromomethane	< 5.00 ug/L
4. Carbontetrachloride	< 5.00 ug/L
5. Chlorobenzene	< 5.00 ug/L
6. Chloroethane	< 5.00 ug/L
7. 2-chloroethylvinyl ether	< 5.00 ug/L
8. Chloroform	< 5.00 ug/L
9. Chloromethane	< 5.00 ug/L
10. Dibromochloromethane	< 5.00 ug/L
11. 1,2-dichlorobenzene	< 5.00 ug/L
12. 1,3-dichlorobenzene	< 5.00 ug/L
13. 1,4-dichlorobenzene	< 5.00 ug/L
14. Dichlorodifluoromethane	< 5.00 ug/L
15. 1,1-dichloroethane	< 5.00 ug/L
16. 1,2-dichloroethane	< 5.00 ug/L
17. 1,1-dichloroethene	< 5.00 ug/L
18. trans-1,2-dichloroethene	< 5.00 ug/L
19. 1,2-dichloropropane	< 5.00 ug/L
20. cis-1,3-dichloropropene	< 5.00 ug/L
21. trans-1,3-dicloropropene	< 5.00 ug/L
22. Methylene chloride	< 5.00 ug/L
23. 1,1,2,2-tetrachloroethane	< 5.00 ug/L
24. Tetrachloroethene	< 5.00 ug/L
25. 1,1,1-trichloroethane	< 5.00 ug/L
26. 1,1,2-trichloroethane	< 5.00 ug/L
27. Trichloroethene	< 5.00 ug/L
28. Trichlorofluoromethane	< 5.00 ug/L
29. Vinyl chloride	< 5.00 ug/L

Reviewed by: _____
Craig R. Achenbach
Laboratory Supervisor

4418 POTTSVILLE PIKE, READING, PENNSYLVANIA 19605 215-921-8833 FAX 215-921-9667

MDS Laboratories

LABORATORY REPORT

INDUSTRIAL HYGIENE **ENVIRONMENTAL TESTING**

- EPA/NVLAP 1262
- AIHA ACCREDITATION NO. 135
- NY DOH 10903
- PA DER 06-353
- NJ DEP 77678

CLIENT: NORBEC ENVIRONMENTAL, LTD.
1031 Rear Chestnut St.
Emmaus, PA 18049

Attn: L. Robitaille

SAMPLE #: 10-1091-06
SAMPLE DATE: 10-09-91
SAMPLE TIME: 1035
SAMPLED BY: ----
RECEIVED BY: GCO
DATE & TIME RECEIVED: 10-10-91 1400

PROJECT DESCRIPTION: Langenfelder USX Fairless Works
STATION :Wastewater OW - 3

PURABLE AROMATICS -- EPA METHOD 602/8020

1. Benzene	< 5.00	ug/L
2. Chlorobenzene	< 5.00	ug/L
3. 1,2-Dichlorobenzene	< 5.00	ug/L
4. 1,3-Dichlorobenzene	< 5.00	ug/L
5. 1,4-Dichlorobenzene	< 5.00	ug/L
6. Ethylbenzene	< 5.00	ug/L
7. Toluene	< 5.00	ug/L
8. Xylenes	< 5.00	ug/L

Reviewed by: _____
Craig R. Achenbach
Laboratory Supervisor

4418 POTTSVILLE PIKE, READING, PENNSYLVANIA 19605 215-921-8833 FAX 215-921-9667

MDS Laboratories

LABORATORY REPORT

INDUSTRIAL HYGIENE **ENVIRONMENTAL TESTING**

- EPA/NVLAP 1262
- AIHA ACCREDITATION NO. 135
- NY DOH 10903
- PA DER 06-353
- NJ DEP 77678

CLIENT: NORBEC ENVIRONMENTAL, LTD.
1031 Rear Chestnut St.
Emmaus, PA 18049

Attn: L. Robitaille

SAMPLE #:
SAMPLE DATE: 10-09-91
SAMPLE TIME: ----
SAMPLED BY: ----
RECEIVED BY: GCO
DATE & TIME RECEIVED: 10-10-91 1400

PROJECT DESCRIPTION: Langenfelder USX Fairless Works
STATION :Wastewater

MDS ID	CLIENT ID	SAMPLE TIME	PET. HYDROCARBONS
10-1091-04	OW - 1	1045	20.4 mg/L
10-1091-05	OW - 2	1000	5.61 mg/L
10-1091-06	OW - 3	1035	4.06 mg/L

Reviewed by: _____
Craig R. Achenbach
Laboratory Supervisor

4418 POTTSVILLE PIKE, READING, PENNSYLVANIA 19605 215-921-8833 FAX 215-921-9667

BCM

APPENDIX F

SURFACE WATER ANALYTICAL RESULTS - PREVIOUS INVESTIGATIONS