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TABLE 6-1
CRITERIA USED TO EVALUATE CHEMICALS DETECTED IN SOIL/SEDIMENT
DRAFT FINAL REMEDIAL INVESTIATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Region III Risk-Based Concentration Residential Soil (mg/kg) [1]	Federal Soil Screening Level Inhalation (mg/kg) [2]	Federal Soil Screening Level Migration to Groundwater Dilution Attenuation Factor = 20 (mg/kg) [2]	Connecticut Direct Exposure Criteria for Soil Residential (mg/kg) [3]	Connecticut Direct Exposure Criteria for Soil Industrial (mg/kg) [3]	Connecticut Pollutant Mobility Criteria Class GB (mg/kg) [3]
ASBESTOS						
DIOXIN TOXICITY EQUIVALENCY (TEQ)	0.0000043					
ALUMINUM	78000					
ANTIMONY	31					
ARSENIC	0.43 [4]		5	27	8200	0.06 [18]
BARIUM	5500	750	29	10	10	0.5 [18]
BERYLLIUM	160	690000	1600	4700	140000	10 [18]
CADMIUM	39	1300	63	2	2	0.04 [18]
CALCIUM		1800	8	34	1000	0.05 [18]
CHROMIUM	230 [5]					
COBALT	4700	270 [5]	38 [5]	100 [5]	100 [5]	0.5 [6] [18]
COPPER	3100			1000 [15]	2500 [15]	4.2 [18]
IRON	23000			2500	76000	13 [18]
LEAD	400 [13]					
MAGNESIUM				500	1000	0.15 [18]
MANGANESE	1600					
MERCURY	23 [7]			1600	47000	0.5 [18] [12]
NICKEL	1600	10	2	20	610	0.02 [18]
POTASSIUM		13000	130	1400	7500	1 [18]
SELENIUM	390					
SILVER	390		5	340	10000	0.5 [18]
SODIUM			34	340	10000	0.36 [18]
THALLIUM	5.5					
VANADIUM	550		0.7	5.4	160	0.05 [18]
ZINC	23000		6000	470	14000	0.5 [18]
1,2,4-TRICHLOROBENZENE	780		12000	20000	610000	50 [18]
1,4-DICHLOROBENZENE	27	3200	5	680	2500 [15]	14
2,4-DIMETHYLPHENOL	1600		2	26	240	15
2-METHYLNAPHTHALENE	1600		9	1000 [15]	2500 [15]	28
2-METHYLPHENOL	3900			1000 [15]	2500 [15]	56
4-BROMOPHENYL PHENYL ETHER			15	1000 [15]	2500 [15]	70
				500 [15]	1000 [15]	82

TABLE 6-1 (continued)
CRITERIA USED TO EVALUATE CHEMICALS DETECTED IN SOIL/SEDIMENT
DRAFT FINAL REMEDIAL INVESTIATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Region III Risk-Based Concentration Residential Soil (mg/kg) [1]	Federal Soil Screening Level Inhalation (mg/kg) [2]	Federal Soil Screening Level Migration to Groundwater Dilution Attenuation Factor = 20 (mg/kg) [2]	Connecticut Direct Exposure Criteria for Soil Residential (mg/kg) [3]	Connecticut Direct Exposure Criteria for Soil Industrial (mg/kg) [3]	Connecticut Pollutant Mobility Criteria Class GB (mg/kg) [3]
4-CHLORO-3-METHYLPHENOL				NE [19]	NE [19]	NE [19]
4-METHYLPHENOL	390			340	2500 [15]	7
ACENAPHTHENE	4700		570	1000 [15]	2500 [15]	84
ACENAPHTHYLENE				1000	2500	84
ANTHRACENE	23000		12000	1000	2500	400
BENZO(A)ANTHRACENE	0.87		2	1	7.8	1
BENZO(A)PYRENE	0.087		8	1	1	1
BENZO(B)FLUORANTHENE	0.87		5	1	7.8	1
BENZO(G,H,I)PERYLENE				1000 [16]	2500 [16]	40
BENZO(K)FLUORANTHENE	8.7		49	8.4	78	1
BIS(2-ETHYLHEXYL)PHTHALATE	46	31000	3600	44	410	11
BUTYLBENZYL PHTHALATE	16000	930	930	1000	2500	200
CARBAZOLE	32		0.6	31	290	0.36
CHRYSENE	87		160	84	780	0.96
DI-N-BUTYL PHTHALATE	7800	2300	2300	1000	2500	140
DI-N-OCTYL PHTHALATE	1600	10000	10000	1000	2500	20
DIBENZO(A,H)ANTHRACENE	0.087		2	0.084	0.78	0.00096
DIBENZOFURAN	310			270	2500 [15]	5.6
DIETHYL PHTHALATE	63000	2000	470	1000 [15]	2500 [15]	1100
DIMETHYL PHTHALATE	780000			1000 [15]	2500 [15]	14000
FLUORANTHENE	3100		4300	1000	2500	56
FLUORENE	3100		560	1000	2500	56
INDENO(1,2,3-CD)PYRENE	0.87		14	0.84	7.8	0.0096
N-NITROSO-DI-N-PROPYLAMINE	0.091		0.00005	0.088	0.82	0.001
N-NITROSODIPHENYLAMINE	130		1	130	1200	1.4
NAPHTHALENE	1600		84	1000	2500	56
PENTACHLOROPHENOL	5.3		0.03	5.1	48	1
PHENANTHRENE				1000	2500	40
PHENOL	47000		100	1000	2500	800
PYRENE	2300		4200	1000	2500	40
1,1,1-TRICHLOROETHANE	1600	1200	2	500	1000	40
1,1,2,2-TETRACHLOROETHANE	3.2	0.6	0.003	3.1	29	0.1
1,1-DICHLOROETHANE	7800	1300	23	500	1000	14

TABLE 6-1 (continued)
CRITERIA USED TO EVALUATE CHEMICALS DETECTED IN SOIL/SEDIMENT
DRAFT FINAL REMEDIAL INVESTIATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Region III Risk-Based Concentration Residential Soil (mg/kg) [1]	Federal Soil Screening Level Inhalation (mg/kg) [2]	Federal Soil Screening Level Migration to Groundwater Dilution Attenuation Factor = 20 (mg/kg) [2]	Connecticut Direct Exposure Criteria for Soil Residential (mg/kg) [3]	Connecticut Direct Exposure Criteria for Soil Industrial (mg/kg) [3]	Connecticut Pollutant Mobility Criteria Class GB (mg/kg) [3]
1,2-DICHLOROETHENE (TOTAL)	700	1200 [9]	0.4 [9]	500	1000	14 [9]
2-BUTANONE	47000			500	1000	80
2-HEXANONE	3100			500 [15]	1000 [15]	56
4-METHYL-2-PENTANONE	6300			500	1000	14
ACETONE	7800	100000	16	500	1000	140
BENZENE	22	0.8	0.03	21	200	0.2
CARBON DISULFIDE	7800	720	32	500 [15]	1000 [15]	140
CHLOROBENZENE	1600	130	1	500	1000	20
CHLOROMETHANE	49			47	440	0.54
ETHYLBENZENE	7800	400	13	500	1000	10.1
STYRENE	16000	1500	4	500	1000	20
TOLUENE	16000	650	12	500	1000	67
VINYL CHLORIDE	0.34	0.03	0.01	0.32	3	0.4
XYLENES, TOTAL	160000	410 [14]	190 [14]	500	1000	19.5
4,4'-DDD	2.7		16	2.6	24	0.029
4,4'-DDE	1.9		54	1.8	17	0.021
4,4'-DDT	1.9		32	1.8	17	0.021
ALDRIN	0.038	3	0.5	0.036	0.34	0.00041
ALPHA-BHC	0.1	0.8	0.0005	0.097	0.91	0.0011
ALPHA-CHLORDANE	1.8 [10]	20 [10]	10 [10]	0.49 [10]	2.2 [10]	0.066 [10]
AROCLOR-1242	0.32			1	10	0.005 [18]
AROCLOR-1248	0.32			1	10	0.005 [18]
AROCLOR-1254	0.32			1	10	0.005 [18]
AROCLOR-1260	0.32			1	10	0.005 [18]
AROCLOR-1262	0.32			1	10	0.005 [18]
AROCLOR-1268	0.32			1	10	0.005 [18]
BETA-BHC	0.35		0.003	0.34	3.2	0.0039
DELTA-BHC				0.097 [17]	0.91 [17]	0.0011 [17]
DIELDRIN	0.04	1	0.004	0.038	0.36	0.007
ENDOSULFAN I	470 [11]		18 [11]	410	1200	8.4
ENDOSULFAN II	470 [11]		18 [11]	410	1200	8.4
ENDOSULFAN SULFATE				410 [11]	1200 [11]	8.4 [11]

TABLE 6-1 (continued)
CRITERIA USED TO EVALUATE CHEMICALS DETECTED IN SOIL/SEDIMENT
DRAFT FINAL REMEDIAL INVESTIATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Region III Risk-Based Concentration Residential Soil (mg/kg) [1]	Federal Soil Screening Level Inhalation (mg/kg) [2]	Federal Soil Screening Level Migration to Groundwater Dilution Attenuation Factor = 20 (mg/kg) [2]	Connecticut Direct Exposure Criteria for Soil Residential (mg/kg) [3]	Connecticut Direct Exposure Criteria for Soil Industrial (mg/kg) [3]	Connecticut Pollutant Mobility Criteria Class GB (mg/kg) [3]
ENDRIN	23		1	20	610	NE [8]
ENDRIN ALDEHYDE				20 [8]	610 [8]	NE [8]
ENDRIN KETONE				20 [8]	610 [8]	NE [8]
GAMMA-BHC (LINDANE)	0.49		0.009	20	610	0.04
GAMMA-CHLORDANE	1.8 [10]	20 [10]	10 [10]	0.49 [10]	2.2 [10]	0.066 [10]
HEPTACHLOR	0.14	0.1	23	0.14	1.3	0.013
HEPTACHLOR EPOXIDE	0.07	5	0.7	0.067	0.63	0.02
METHOXYCHLOR	390		160	340	10000	8

Notes:

1) U.S. EPA Region III Risk-Based Concentration Table, October 1, 1999.Values presented in this table are as provided by EPA Region III. For purposes of COPC selection, noncarcinogenic values were adjusted to correspond to an HQ of 0.1. Adjusted values are presented in the COPC selection tables.
2) U.S. EPA Technical Background Document, Soil Screening Levels, Table A-1, EPA/540/R-95/128, May, 1996.
3) Regulations of Connecticut State Agencies, Direct Exposure Criteria for Soil, Regulation 22a-133k, printed November 24, 1997.
4) value for arsenic as a carcinogen
5) hexavalent chromium value
6) total chromium value
7) mercuric chloride value
8) endrin value
9) cis-1,2-dichloroethene value
10) chlordane value
11) endosulfan value
12) secondary MCL or based on the secondary MCL value
13) action level; USEPA, OSWER Directive #9355.4-12, July 1994
14) o-xylene value
15) ceiling limit; calculated value exceeds the ceiling limit
16) pyrene value
17) alpha-BHC value
18) value is for aqueous units (mg/L) and is based on SPLP or TCLP analytical results
19) chemical will be addressed qualitatively at the CTDEP's request

TABLE 6-2
CRITERIA USED TO EVALUATE CHEMICALS DETECTED IN SURFACE WATER
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Region III Risk-Based Concentration Tap Water (ug/L) [1]	Federal Maximum Contaminant Level (ug/L) [2]	Federal Maximum Contaminant Level Goal (ug/L) [2]	Connecticut Maximum Contaminant Level (ug/L) [3]	Connecticut Ambient Water Quality Criteria (ug/L) [4]	Connecticut Water Quality Standards Human Health Organisms (ug/L) [4]	Connecticut Water Quality Standards Freshwater Chronic (ug/L) [4]	Connecticut Water Quality Standards Saltwater Chronic (ug/L) [4]	Region III Risk-Based Concentration Fish Ingestion (mg/kg) [1]
DIOXIN TOXICITY EQUIVALENCY TEQ	0.00000045								
ALUMINUM	37000	50 - 200 [12]							
ANTIMONY	15	6	6	6	14	4300			
ARSENIC	0.045 [5]	50		50	0.018	0.14	190	36	
BARIUM	2600	2000	2000	2000					
BERYLLIUM	73	4	4	4	0.0077	0.13			
CADMIUM	18	5	5	5	16	170	0.66	9.3	1.4
CALCIUM									
CHROMIUM	110 [6]	100	100	100	170 [6]	3400 [6]	11 [6]	50 [6]	
COBALT	2200								
COPPER	1500	1300 [13]	1300				4.8	2.9	
IRON	11000	300 [12]							
LEAD		15 [13]	0		50		1.3	8.5	
MAGNESIUM									
MANGANESE	730	50 [12]							
MERCURY	3.7	2	2	2	0.14	0.15	0.012	0.025	0.14
NICKEL	730	100	100	100	610	4600	88	8.3	27
POTASSIUM									
SELENIUM	180	50	50	50	100	6800	5	71	
SILVER	180	100 [12]		50	105	65000	1.2 [15]	2.3 [15]	
SODIUM				28000					
THALLIUM	2.6 [8]	2	0.5	2	1.7	6.3			
VANADIUM	260								
ZINC	11000	5000 [12]					12.3	86	
BENZO(A)ANTHRACENE	0.092				0.0028	0.031			0.0043
BENZO(B)FLUORANTHENE	0.092				0.0028	0.031			0.0043
BIS(2-ETHYLHEXYL)PHTHALATE	4.8	6	0	6	1.8	5.9			
CHRYSENE	9.2				0.0028	0.031			0.43
DI-N-BUTYL PHTHALATE	3700				2700	12000			
DIETHYL PHTHALATE	29000				23000	120000			
FLUORANTHENE	1500				300	370			
PHENANTHRENE					0.0028	0.031			
PYRENE	180				960	11000			
1,1,1-TRICHLOROETHANE	540	200	200	200	3100				
1,1-DICHLOROETHANE	800								
1,1-DICHLOROETHENE	0.044	7	7	7	0.057	3.2			
1,2-DICHLOROETHENE (TOTAL)	55	70 [9]	70 [9]	70 [9]					

TABLE 6-2 (continued)
CRITERIA USED TO EVALUATE CHEMICALS DETECTED IN SURFACE WATER
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Region III Risk-Based Concentration Tap Water (ug/L) [1]	Federal Maximum Contaminant Level (ug/L) [2]	Federal Maximum Contaminant Level Goal (ug/L) [2]	Connecticut Maximum Contaminant Level (ug/L) [3]	Connecticut Ambient Water Quality Criteria (ug/L) [4]	Connecticut Water Quality Standards Human Health Organisms (ug/L) [4]	Connecticut Water Quality Standards Freshwater Chronic (ug/L) [4]	Connecticut Water Quality Standards Saltwater Chronic (ug/L) [4]	Region III Risk-Based Concentration Fish Ingestion (mg/kg) [1]
ACETONE	610								
CHLOROBENZENE	35	100	100	100	680	21000			
CHLOROFORM	0.15	100/80 [14]	0	100	5.7	470			
CHLOROMETHANE	2.1				5.7	470			
TRICHLOROETHENE	1.6	5	0	5	2.7	81			
VINYL CHLORIDE	0.019	2	0	2	2	525			
4,4'-DDD	0.28				0.00083	0.00084			0.013
4,4'-DDE	0.2				0.00059	0.00059			0.0093
4,4'-DDT	0.2				0.00059	0.00059	0.001	0.001	0.0093
ALDRIN	0.0039				0.00013	0.00014	1.5 [15]	0.65 [15]	0.00019
ALPHA-BHC	0.011				0.0039	0.013			0.0005
AROCLOR-1254	0.033	0.5	0	0.5	0.000044	0.000045	0.014	0.03	0.0016
AROCLOR-1262	0.033	0.5	0	0.5	0.000044 [16]	0.000045 [16]	0.014 [16]	0.03 [16]	0.0016
AROCLOR-1268	0.033	0.5	0	0.5	0.000044 [16]	0.000045 [16]	0.014 [16]	0.03 [16]	
BETA-BHC	0.037				0.014	0.046			
DIELDRIN	0.0042				0.00014	0.00014	0.0019	0.0019	0.0002
ENDOSULFAN I	220 [11]				0.93	2	0.056	0.0087	
ENDOSULFAN II	220 [11]				0.93	2	0.056	0.0087	
ENDOSULFAN SULFATE					0.93	2			
ENDRIN	11	2	2	2	0.76	0.81	0.0023	0.0023	
ENDRIN ALDEHYDE					0.76	0.81			
ENDRIN KETONE									
GAMMA-BHC (LINDANE)	0.052	0.2	0.2	0.2	0.019	0.063	0.08	0.08 [15]	
GAMMA-CHLORDANE	0.19 [10]	2 [10]	0 [10]	2	0.00057 [10]	0.00059 [10]	0.0043 [10]	0.004 [10]	
HEPTACHLOR	0.015	0.4	0	0.4	0.00021	0.00021	0.0038	0.0036	
HEPTACHLOR EPOXIDE	0.0074	0.2	0	0.2	0.0001	0.00011	0.0038	0.0036	0.00035
METHOXYCHLOR	180	40	40	40					6.8

Notes:
1) U.S. EPA Region III Risk-Based Concentration Table, October 1, 1999.Values presented in this table are as provided by EPA Region III. For purposes of COPC selection, noncarcinogenic values were adjusted to correspond to an HQ of 0.1. Adjusted values are presented in the COPC selection tables.
2) U.S. EPA, Office of Water, Drinking Water Regulations and Health Advisories, October, 1996.
3) Regulations of Connecticut State Agencies, Standards for Quality and Adequacy of Public Drinking Water, Regulation 19-13, printed November 24, 1997.
4) State of Connecticut Department of Environmental Protection, Water Quality Standards, Appendix D: Numerical Water Quality Criteria for Chemical Constituents, March 17, 1997.
5) value for arsenic as a carcinogen
6) hexavalent chromium value
7) inorganic mercury value
8) thallic oxide value
9) cis-1,2-dichloroethene value

TABLE 6-2 (continued)
CRITERIA USED TO EVALUATE CHEMICALS DETECTED IN SURFACE WATER
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Region III Risk-Based Concentration Tap Water (ug/L) [1]	Federal Maximum Contaminant Level (ug/L) [2]	Federal Maximum Contaminant Level Goal (ug/L) [2]	Connecticut Maximum Contaminant Level (ug/L) [3]	Connecticut Ambient Water Quality Criteria (ug/L) [4]	Connecticut Water Quality Standards Human Health Organisms (ug/L) [4]	Connecticut Water Quality Standards Freshwater Chronic (ug/L) [4]	Connecticut Water Quality Standards Saltwater Chronic (ug/L) [4]	Region III Risk-Based Concentration Fish Ingestion (mg/kg) [1]

10) chlordane value
11) endosulfan value
12) secondary MCL or based on the secondary MCL value
13) action level; USEPA, OSWER Directive #9355.4-12, July 1994
14) 1994 proposed rule for disinfectants and disinfection by-products: total for all THMs combined cannot exceed the 80 ug/L level
15) acute value
16) value provided for other PCBs has been substituted; professional judgment used to determine surrogate value
17) methylmercury value
MFL - million fibers (>10 um in length) per liter

TABLE 6-3
CANCER SLOPE FACTORS FOR CHEMICALS OF CONCERN
DRAFT FINAL REMEDIAL INVESTIGATION – AREA II
RAYMARK - FERRY CREEK – OU3
STRATFORD, CONNECTICUT

Chemical	Weight of Evidence [1]	CSF Oral $(mg/kg/day)^{-1}$	Gastrointestinal Absorption Factor	CSF Dermal $(mg/kg/day)^{-1}$ [2]
1,1,1-Trichloroethane	D	NA	Not Adjusted[6]	NA
1,1-Dichloroethene	C	6.0E-1[8][1]	Not Adjusted[6]	6.0E-1
1,2-Dichloroethene(total)	NA	NA	Not Adjusted[6]	NA
Trichloroethene	NA	1.1E-2[8]	Not Adjusted[6]	1.1E-2
Vinyl Chloride	A	1.9E+0[8][5]	Not Adjusted[6]	1.9E+0
Bis(2-ethylhexyl)phthalate	B2	1.4E-2[8][1]	Not Adjusted[6]	1.4E-2
Benzo(a)anthracene	B2	7.3E-1[8]	Not Adjusted[6]	7.3E-1
Benzo(b)fluoranthene	B2	7.3E-1[8]	Not Adjusted[6]	7.3E-1
Benzo(a)pyrene	B2	7.3E+0[1]	Not Adjusted[6]	7.3E+0
Dibenz(a,h)anthracene	B2	7.3E+0[8]	Not Adjusted[6]	7.3E+0
Indeno(1,2,3-cd)pyrene	B2	7.3E-1[8]	Not Adjusted[6]	7.3E-1
Aldrin	B2	1.7E+1[8][1]	Not Adjusted[6]	1.7E+1
Chlordane (alpha and gamma)	B2	3.5E-1[8][1]	Not Adjusted[6]	3.5E-1
4,4'-DDD	B2	2.4E-1[8][1]	Not Adjusted[6]	2.4E-1
4,4'-DDE	B2	3.4E-1[8][1]	Not Adjusted[6]	3.4E-1
4,4'-DDT	B2	3.4E-1[8][1]	Not Adjusted[6]	3.4E-1
Dieldrin	B2	1.6E+1[8] [1]	Not Adjusted[6]	1.6E+1
Heptachlor epoxide	B2	9.1E+0[8] [1]	Not Adjusted[6]	9.1E+0
Aroclor 1254	B2	2.0E+0 RME	Not Adjusted[6]	2.0E+0 RME
Aroclor (total)	B2	2.0E+0 RME/[1] 1.0E+0 CTE[9]	Not Adjusted[6]	2.0E+0 RME/[1] 1.0E+0 CTE[9]
Dioxins (2,3,7,8-TCDD TEQ)	B2	1.5E+5[8][5]	Not Adjusted[6]	1.5E+5
Antimony	D	NA	0.15[6]	NA
Arsenic	A	1.5E+0[3] [1]	Not Adjusted[6]	1.5E+0
Barium	D	NA	0.07[6]	NA
Cadmium (food)	B1	NA	0.05[6]	NA
Chromium	A[4][7]	NA	0.025[6]	NA
Lead	B2	NA	0.50[8]	NA
Manganese (non-food)	D	NA	0.06[6]	NA
Manganese (food)	D	NA	0.06[6]	NA
Mercury	D	NA	0.07[6]	NA
Nickel	D	NA	0.04[6]	NA
Thallium	D	NA	1.0[6]	NA
Vanadium	D	NA	0.026[6]	NA
Zinc	D	NA	Not Adjusted[6]	NA

TABLE 6-3 (continued)
CANCER SLOPE FACTORS FOR CHEMICALS OF CONCERN
DRAFT FINAL REMEDIAL INVESTIGATION – AREA II
RAYMARK - FERRY CREEK – OU3
STRATFORD, CONNECTICUT

Notes:

1) IRIS, USEPA, 1999.
2) Values calculated as per RAGs Part A, USEPA, 1989d.
3) Proposed based on carcinogenicity.
4) Hexavalent chromium.
5) HEAST, USEPA. 1997.
6) Table 4.1, "Summary of Gastrointestinal Absorption Efficiencies and Recommendations for Adjustment of Oral Slope Factors for Specific Compounds", 11/13/98, U.S.EPA Region I.
7) USEPA 1994b.
8) USEPA, Region IX Preliminary Remediation Goals Table, October 1, 1999.
9) USEPA PCB Guidance, September 1996e.

NE Chemicals Not Evaluated.
NA Values Not Available.

TABLE 6-4
ESTIMATED ORDERS OF POTENTIAL POTENCY FOR CARCINOGENIC PAHs[1]
DRAFT FINAL REMEDIAL INVESTIGATION – AREA II
RAYMARK - FERRY CREEK – OU3
STRATFORD, CONNECTICUT

Chemical	Weight-of-Evidence	Order of Potential Potency
Benzo(a)anthracene	B2	0.1
Benzo(b)fluoranthene	B2	0.1
Benzo(k)fluoranthene	B2	0.01
Benzo(a)pyrene	B2	1.0
Chrysene	B2	0.001
Dibenzo(a,h)anthracene	B2	1.0
Indeno(1,2,3-cd)pyrene	B2	0.1

Note:

1) USEPA, July 1993g; USEPA Region I, 1994m.

TABLE 6-5
DIOXIN AND FURAN TOXICITY EQUIVALENT FACTORS[a]
DRAFT FINAL REMEDIAL INVESTIGATION – AREA II
RAYMARK – FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Compound	TEF
Dioxins	
Mono-, Di-, and Trichlorodibenzo-p-dioxins	0
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1
Other TCDDs	0
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDDs)	1
Other PeCDDs	0
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxins (HxCDDs)	0.1
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxins (HxCDDs)	0.1
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxins (HxCDDs)	0.1
Other HxCDDs	0
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.01
Other HpCDDs	0
Octachlorodibenzo-p-dioxin (OCDD)	0.0001
Furans	
Mono-, Di-, and Trichlorodibenzo-p-furans	0
2,3,7,8-Tetrachlorodibenzo-p-furan (TCDF)	0.1
Other TCDFs	0
1,2,3,7,8-Pentachlorodibenzo-p-furan (PeCDF)	0.05
2,3,4,7,8-Pentachlorodibenzo-p-furans (PeCDF)	0.5
Other PeCDFs	0
1,2,3,4,7,8-Hexachlorodibenzo-p-furans (HxCDFs)	0.1
1,2,3,6,7,8-Hexachlorodibenzo-p-furans (HxCDFs)	0.1
1,2,3,7,8,9-Hexachlorodibenzo-p-furans (HxCDFs)	0.1
2,3,4,6,7,8-Hexachlorodibenzo-p-furans (HxCDFs)	0.1
Other HxCDFs	0
1,2,3,4,6,7,8-Heptachlorodibenzo-p-furans (HpCDFs)	0.01
1,2,3,4,7,8,9-Heptachlorodibenzo-p-furans (HpCDFs)	0.01
Other HpCDFs	0
Octachlorodibenzo-p-furan (OCDF)	0.0001

Note:

[a]Van de Berg et al., "Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, PCDFs for Humans and Wildlife, " Environmental Health Perspectives 106: pp, 775-792, December, 1998.

TABLE 6-6
SLOPE FACTORS FOR AROCLORS [1]
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Upper-bound Slope Factors	Application	Central-estimate Slope Factors
2 mg/kg/day	soil/sediment ingestion; dust/aerosol inhalation	1 mg/kg/day
0.4 mg/kg/day	drinking water ingestion; vapor inhalation	0.3 mg/kg/day
0.07 mg/kg/day	used when information is available about congener composition of mixture	0.04 mg/kg/day

Note:

1) U.S. EPA, National Center for Environmental Assessment, Office of Research and Development, "PCBs: Cancer Dose-Response Assessment and Application to Environmental Mixtures", EPA/600/P-96/001F, September, 1996.

TABLE 6-7
REFERENCE DOSES AND ENDPOINTS/TARGET ORGANS FOR
CHEMICALS OF CONCERN
DRAFT FINAL REMEDIAL INVESTIGATION – AREA II
RAYMARK – FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Chemical	Dermal Absorption Factors for Soil[1]	RfD Subchronic (mg/kg/day) [4]	RfD Oral-Chronic (mg/kg/day)	Gastrointestinal Absorption Factor	RfD Dermal-Chronic (mg/kg/day) [3]	Toxic Endpoints or Target Organs[7]
1,1,1-Trichloroethane	NE	NA	3.5E-2[2]	Not Adjusted[6]	2.0E-2	NA
1,1-Dichloroethene	NE	9.0E-3	9.0E-3[2][7]	Not Adjusted[6]	9.0E-3	Liver
1,2-Dichloroethene (total)	NE	9.0E-3	9.0E-3[2]	Not Adjusted[6]	9.0E-3	Blood
Trichloroethene	NE	NA	6.0E-3[2]	Not Adjusted[6]	6.0E-3	NA
Vinyl Chloride	NE	NA	NA	Not Adjusted[6]	NA	NA
Bis(2-ethylhexyl)phthalate	NE	NA	2.0E-2[2][7]	Not Adjusted[6]	2.0E-2	Liver
Benzo(a)anthracene	0.13	NA	NA	Not Adjusted[6]	NA	NA
Benzo(b)fluoranthene	0.13	NA	NA	Not Adjusted[6]	NA	NA
Benzo(a)pyrene	0.13	NA	NA	Not Adjusted[6]	NA	NA
Dibenz(a,h)anthracene	0.13	NA	NA	Not Adjusted[6]	NA	NA
Indeno(1,2,3-cd)pyrene	0.13	NA	NA	Not Adjusted[6]	NA	NA
Aldrin	NE	3.0E-5	3.0E-5[2][7]	Not Adjusted[6]	3.0E-5	Liver
Chlordane (alpha and gamma)	0.04	5.0E-3	5.0E-4[2][7]	Not Adjusted[6]	5.0E-4	Liver
4,4'-DDD	NE	NA	NA	Not Adjusted[6]	NA	NA
4,4'-DDE	NE	NA	NA	Not Adjusted[6]	NA	NA
4,4'-DDT	0.03	5.0E-4	5.0E-4[2][7]	Not Adjusted[6]	5.0E-4	Liver
Dieldrin	NE	5.0E-5	5.0E-5[2][7]	Not Adjusted[6]	5.0E-5	Liver
Heptachlor Epoxide	NE	1.3E-5	1.3E-5[2][7]	Not Adjusted[6]	1.3E-5	Liver
Aroclors (total)	0.14	NA	2.0E-5	Not Adjusted[6]	2.0E-5	
Dioxins (2,3,7,8-TCDD TEQ)	0.001 to 0.03	NA	NA	Not Adjusted[6]	NA	NA
Asbestos	NE	NA	NA	NA	NA	NA
Antimony	NE	4.0E-4	4.0E-4[2][7]	0.15[6]	6.0E-5	Whole body, blood
Arsenic	0.03	3.0E-4	3.0E-4[2][7]	Not Adjusted[6]	3.0E-4	Skin

TABLE 6-7 (continued)
REFERENCE DOSES AND ENDPOINTS/TARGET ORGANS FOR CHEMICALS OF CONCERN
DRAFT FINAL REMEDIAL INVESTIGATION – AREA II
RAYMARK – FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Chemical	Dermal Absorption Factors for Soil[1]	RfD Subchronic (mg/kg/day) [4]	RfD Oral-Chronic (mg/kg/day)	Gastrointestinal Absorption Factor	RfD Dermal-Chronic (mg/kg/day) [3]	Toxic Endpoints or Target Organs[7]
Barium	NE	7.0E-2	7.0E-2[2][7]	0.07[6]	4.9E-3	Cardiovascular (oral) Fetus (inhalation)
Cadmium (food)	0.01	NA	5.0E-4[2][7]	0.05[6]	5.0E-5	Kidney
Chromium	NE	1.0E+0[9] 2.0E-2[5]	3.0E-3[2][5][7]	0.025[6]	7.5E-5	Not Reported
Lead	NE	NA	NA	NA	NA	CNS[7]
Manganese (non-food)	NE	1.4E-1	2.4E-2[2][7]	0.06[6]	1.2E-3	CNS
Manganese (food)	NE	1.4E-1	1.4E-1[2]	0.06[6]	8.4E-3	CNS
Mercury	NE	3.0E-3[8]	3.0E-4[8][7]	0.07[6]	2.1E-5	Kidney (oral) CNS (inhalation)
Nickel	NE	2.0E-2	2.0E-2[2][7]	0.04[6]	8.0E-4	Whole body, major organs
Thallium	NE	NA	7.0E-5[2]	1.0[6]	7.0E-5	Liver, blood, hair
Vanadium	NE	7.0E-3	7.0E-3[4]	0.026[6]	1.8E-4	Not Reported
Zinc	NE	3.0E-1	3.0E-1[2][7]	Not Adjusted[6]	3.0E-1	Blood[7]

Notes:

1) Values supplied by USEPA Region I.
2) USEPA, October 1, 1999. Region IX Preliminary Remediation Goals Table
3) Values calculated as per RAGs Part A, USEPA 1989d.
4) HEAST, USEPA, 1997b.
5) Hexavalent chromium.

TABLE 6-7 (continued)
REFERENCE DOSES AND ENDPOINTS/TARGET ORGANS FOR
CHEMICALS OF CONCERN
DRAFT FINAL REMEDIAL INVESTIGATION – AREA II
RAYMARK – FERRY CREEK - OU3
STRATFORD, CONNECTICUT

6) Table 4.1, "Summary of Gastrointestinal Absorption Efficiencies and Recommendations for Adjustment of Oral Slope Factors for Specific Compounds", 11/13/98, U.S.EPA Region I.
7) IRIS, December, 1999.
8) Value for Mercuric Chloride presented.
9) Value for trivalent chromium presented

NA - Values Not Available.
NE - Chemical Not Evalauted

TABLE 6-8
SUMMARY OF POTENTIAL RECEPTORS
DRAFT FINAL REMEDIAL INVESTIGATION – AREA II
RAYMARK - FERRY CREEK – OU3
STRATFORD, CONNECTICUT

	Potential Receptor				
Area of Concern	**Commercial/ Industrial Worker[1]**	**Frequent Recreational User[2] Adult/ Child**	**Wetland/Marsh Receptor[3] Adult/ Child[4]**	**Trespasser Older Child[5]**	**Fisherman Adult**
Area B: Lower Ferry Creek Wetlands along Lockwood Avenue	X		X	X	X
Area C: Housatonic Boat Club Wetlands Area			X		
Area F: Selby Pond		X			X

Notes:

1) Potential exposure to subsurface soil (> 2feet) will be evaluated under the future land use scenario for this receptor.
2) Refers to adult and child (ages 0 to 6) residents whose homes border area.
3) Refers to adults and children who may be infrequently exposed via walking or wading.
4) Older small child (ages 6 to 11) to be evaluated.
5) Older child (ages 9 to 18) to be evaluated.
6) X - Indicates potential receptors for the site based on current and/or future land use.

TABLE 6-9
SUMMARY OF EXPOSURE ROUTES EVALUATED QUANTITATIVELY
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK – OU3
STRATFORD, CONNECTICUT

Receptors	Exposure Routes
Commercial/Industrial Worker	• Soil ingestion (surface and subsurface) • Dermal contact with soils (surface and subsurface)
Frequent Recreational User/ Wetland/Marsh Receptor/Trespasser	• Ingestion of surficial soils, wetland soils, and/or sediments. • Dermal contact with surficial soils, wetland soils, and/or sediments. • Dermal contact with surface waters.
Local Fisherman	• Ingestion of shellfish and finfish.

TABLE 6-10A
SUMMARY OF EXPOSURE INPUT PARAMETERS - SEDIMENT/SOIL[1]
DRAFT FINAL REMEDIAL INVESTIGATION – AREA II
RAYMARK - FERRY CREEK – OU3
STRATFORD, CONNECTICUT

Exposure Input Parameter	Commercial/Industrial Worker		Frequent Recreational User				Wetland/Marsh Receptor				Adolescent Trespasser (9-18 yrs)	
			Adult		Child (0-6 yrs)		Adult		Child (6-11 yrs)			
	RME	CTE	RME	CTE	RME	CTE	RME	CTE	RME	CTE	RME	CTE
C (mg/kg)	95% UCL[2]											
EF (day/year)	250[3]	250[3]	90[5]	90[5]	90[5]	90[5]	20	20	20	20	52	52
ED (years)	25[4]	9	24[4]	7[4]	6[4]	2[4]	24	7	6	2	10	5
BW (kg)	70[4]	70[4]	70[4]	70[4]	15[4]	15[4]	70[4]	70[4]	31[4]	31[4]	51[6]	51[6]
IR (mg/day)	100	50[4]	100	50	200	100	100	50	100	50	100	50
ABS (unitless)	Chemical Specific Dermal Absorption Factors (Table 6-10B)											
Dry Soil AF (mg/cm^2) [7][9] Wet Soil AF (mg/cm^2) [7][10]	0.2	0.02	0.07 0.3	0.01 0.04	0.2 1.0	0.06 0.2	0.3	0.04	1.0	0.2	0.07[8]	0.01[8]
SA (cm^2/day) [8]	2,500	2,500	5,700	5,700	2,900	2,900	5,700	5,700	3,200	3,200	3,500	3,500

Notes:

RME	Reasonable Maximum Exposure.	ED	Exposure duration.	ABS	Absorption Factor.
CTE	Central Tendency Exposure.	BW	Body weight.	AF	Soil-to-skin adherence factor.
C	Exposure concentrations.	IR	Ingestion rate.	SA	Skin surface area available for contact.
UCL	Upper confidence limit.				
EF	Exposure Frequency.				

1) Unless otherwise specified, the value presented represents professional judgement and was presented in the Final RI/FS Work Plan for Raymark.
2) For a dataset consisting of less than 10 samples or when the distribution of the data is undefined, maximum detection used for RME and arithmetic average concentration used for CTE.
3) Value based on Connecticut Remediation Standards (CTDEP, December 13, 1995).
4) USEPA Region I, August 1994.
5) An exposure frequency of 90 days/year was assumed for area F due to wet conditions.
6) Exposure Factors Handbook Volume I, August 1997, EPA/600/P-95/002Fa.
7) USEPA Draft Dermal Guidance, November 1998.
8) Assumes exposure to face, hands, and forearms of commercial receptors; assumes exposure to face, hands, forearms, and lower legs for adult recreational and wetland/marsh receptors and adolescent trespassers; assumes exposure to face, hands, forearms, lower legs, and feet for child recreational and wetland/marsh receptors. Values based on Exposure Factors Handbook, 1997.
9) An adherence factor (AF) for dry soils was used for commercial workers and the adolescent trespasser in Area B. USEPA Draft Dermal Guidance, November 1998.
10) An adherence factor (AF) for wet soils was used for Area B and Area C wetland/marsh receptors and Area F frequent recreational users. USEPA Draft Dermal Guidance, November 1998.

TABLE 6-10B
CHEMICAL SPECIFIC DERMAL ABSORPTION FACTORS FOR SOILS/SEDIMENTS
DRAFT FINAL REMEDIAL INVESTIGATION – AREA II
RAYMARK - FERRY CREEK – OU3
STRATFORD, CONNECTICUT

Compound	Dermal Absorption Factor	Reference
Arsenic	0.03	Wester, et al. (1993a)
Cadmium	0.01	Wester, et al. (1992a) U.S. EPA (1992)
Chlordane	0.04	Wester, et al. (1992b)
2,4-Dichlorophenoxyacetic acid	0.05	Wester, et al. (1996)
Dichlorodiphenyltrichloroethane (DDT)	0.03	Wester, et al. (1990)
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) <10% organic soil >10% organic soil	 0.03 0.001	U.S. EPA (1992)
Polyaromatic hydrocarbons (PAHs) Benzo(a)pyrene	 0.13	Wester, et al. (1999)
Polychlorinated biphenyls (PCBs) Aroclor 1254 and 1242	 0.14	Wester, et al. (1993b)
Pentachlorophenol	0.25	Wester, et al. (1993c)

TABLE 6-11
SUMMARY OF EXPOSURE INPUT PARAMETERS –SURFACE WATER [1][2]
DRAFT FINAL REMEDIAL INVESTIGATION – AREA II
RAYMARK - FERRY CREEK – OU3
STRATFORD, CONNECTICUT

Exposure Input Parameter	Frequent Recreational User Adult/Child (0-6 yrs)		Wetland/Marsh Receptor Adult/Child (6-11 yrs)	
	RME	CTE	RME	CTE
C (mg/kg)	95% UCL[3]			
EF (days/year)	90	90	20	20
ED (years)	24/6[4][5]	7/2[4][5]	24/6	7/2[4][5]
BW (kg)	70/15[4][5]	70/15[4][5]	70/31[4][5]	70/31[4][5]
ET (hours/day)/ t_{event} (hours/event)[6]	1.0	1.0	1.0	1.0
EV (events/day)	1			
SA[7] (cm^2/day)	4,500/1,900[5][7][8]	4,500/1,900[5][7][8]	4,500/2,500[5][7][8]	4,500/2,500[5][7][8]

Notes:

RM E	Reasonable Maximum Exposure.	EF	Exposure frequency.	ET	Exposure time.
CTE	Central Tendency Exposure.	ED	Exposure duration.	t_{event}	Duration of event.
C	Exposure concentrations.	BW	Body weight.	EV	Event frequency.
UCL	Upper confidence limit.	CR	Contact rate.	A	Skin surface area available for contact

1) Unless otherwise specified, the value presented represents professional judgement and was presented in the Final RI//FS Work Plan for Raymark - Ferry Creek.
2) Surface water exposures for the commercial worker are anticipated to be minimal and are not evaluated quantitatively in this baseline risk assessment.
3) For a data set consisting of <10 samples or when the distribution of the data set is undefined, maximum detection used for RME and arithmetic average concentration used for CTE.
4) USEPA Region I, 1994.
5) Adult receptor value/child receptor value.
6) Exposure Factors Handbook Volume I, August 1997, EPA/600/P-95/002Fa.
7) For non-swimming recreational scenarios, exposure to hands, lower legs, and feet is assumed. These body parts make up 25% of total body surface area. Values based on Exposure Factors Handbook 1997.
8) Applicable for non-swimming recreational scenario.

TABLE 6-12
SUMMARY OF EXPOSURE INPUT PARAMETERS-SHELLFISH/FINFISH
DRAFT FINAL REMEDIAL INVESTIGATON – AREA II
RAYMARK - FERRY CREEK – OU3
STRATFORD, CONNECTICUT

Exposure Input	Adult Fisherman[1]	
	RME	CTE
C (mg/kg)	95% UCL[2]	
IR (kg/day) - Shellfish	0.017[3]	
IR (kg/day) - Finfish	0.054[5]	0.0095[5]
EF (days/year)	365[4]	365[4]
ED (years)	30[5]	9[5]
BW (kg)	70[5]	70[5]

Notes:

RME Reasonable Maximum Exposure.
C Exposure concentration.
UCL Upper confidence limit.
IR Ingestion rate for shellfish/finfish.
EF Exposure frequency.
ED Exposure duration.
BW Body weight.

1) Evaluation performed for adult only (EPA, September 1989; June 1995). Exposure assumed to be similar for children.
2) For a data set consisting of <10 samples or when the distribution of the data set is undefined, maximum detection used for RME and arithmetic average concentration used for CTE.
3) State of Connecticut default value for shellfish consumption .
4) Exposure input value as specified in the RI/FS Final Work Plan for Raymark - Ferry Creek, Stratford, Connecticut.
5) USEPA Region I, August 1994.

TABLE 6-13
SELECTION OF CHEMICALS OF POTENTIAL CONCERN
AREA B, WETLANDS ALONG LOCKWOOD AVE.
SURFACE SOIL/SEDIMENT
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	COPC Screening Level (1)	N/C (2)	SSL Inhalation (3)	State Residential Direct Exposure (4)	State Industrial Direct Exposure (4)	Background Concentration (5)	Select As COPC? (6)
Volatile Organic Compounds (ug/kg)												
1,1,1-TRICHLOROETHANE	1/43	7 - 7	11 - 280	13	RM-SD-SD20-04	160000	N	1200000	500000	1000000	-	N
1,1-DICHLOROETHANE	6/46	4 - 90	11 - 280	14	RM-SD-SD20-04	780000	N	1300000	500000	1000000	-	N
1,2-DICHLOROETHENE (TOTAL)	2/44	4 - 16	11 - 280	13	RM-SD-SD10-01	70000	N	1200000	500000	1000000	-	N
2-BUTANONE	11/47	13 - 1300	11 - 46	76	RM-SD-DB04-03, OU3-B2-SD07-0002	4700000	N	-	500000	1000000	-	N
ACETONE	11/47	13 - 4100	11 - 190	182	OU3-B2-SD07-0002	780000	N	100000000	500000	1000000	-	N
BENZENE	2/43	3 - 81	11 - 280	15	RM-SD-SD20-04	22000	C	800	21000	200000	-	N
CARBON DISULFIDE	19/46	5 - 290	11 - 280	28	RM-SD-SD9D-03	780000	N	720000	500000	1000000	-	N
CHLOROBENZENE	3/44	4 - 19	11 - 280	13	RM-SD-SD20-04	160000	N	130000	500000	1000000	-	N
CHLOROMETHANE	1/44	5 - 5	11 - 280	13	RM-SD-SD10-01	49000	C	-	47000	440000	-	N
STYRENE	1/44	10 - 10	11 - 280	13	RM-SD-DB04-03	1600000	N	1500000	500000	1000000	-	N
TOLUENE	1/45	28 - 28	11 - 280	14	RM-SD-DB04-03	1600000	N	650000	500000	1000000	-	N
VINYL CHLORIDE	1/43	10 - 10	11 - 280	13	RM-SD-SD20-04	340	C	30	320	3000	-	N
XYLENES, TOTAL	2/44	4 - 8	11 - 280	13	RM-SD-SD10-01	16000000	N	410000	500000	1000000	-	N
Semivolatile Organic Compounds (ug/kg)												
2,4-DIMETHYLPHENOL	4/42	33 - 170	370 - 9700	1059	RM-SD-DB01-03	160000	N	-	1000000	2500000	-	N
2-METHYLNAPHTHALENE	7/44	35 - 850	370 - 9700	1042	RM-SD-DB10-03	160000	N	-	1000000	2500000	-	N
4-BROMOPHENYL PHENYL ETHER	1/42	190 - 190	370 - 9700	1116	SA674AC-N37,E103(1.5-2.2)	450000	N	-	500000	1000000	-	N
4-METHYLPHENOL	6/43	34 - 850	370 - 9700	1041	RM-SD-DB10-03	39000	N	-	340000	2500000	-	N
ACENAPHTHENE	15/46	40 - 1900	370 - 9700	953	RM-SD-SD20-04	470000	N	-	1000000	2500000	-	N
ACENAPHTHYLENE	26/49	42 - 4100	370 - 9700	1110	RM-SD-DB05-03	-	-	-	1000000	2500000	-	N
ANTHRACENE	27/51	54 - 3700	370 - 9700	1048	RM-SD-DB05-03	2300000	N	-	1000000	2500000	-	N
BENZO(A)ANTHRACENE	45/52	75 - 10000	370 - 9700	1896	RM-SD-DB05-03, RM-SD-DB05-03	880	C	-	1000	7800	-	Y
BENZO(A)PYRENE	41/52	54 - 6800	370 - 9700	1732	RM-SD-SD10-01	88	C	-	1000	1000	-	Y
BENZO(B)FLUORANTHENE	49/52	64 - 14000	380 - 700	3158	RM-SD-SD10-01, RM-SD-SD10-01	880	C	-	1000	7800	-	Y
BENZO(G,H,I)PERYLENE	31/51	23 - 4200	370 - 9700	1152	RM-SD-SD10-01	-	-	-	1000000	2500000	-	N
BENZO(K)FLUORANTHENE	26/50	64 - 5700	380 - 9700	1512	RM-SD-DB05-03	8800	C	-	8400	78000	-	N
BIS(2-ETHYLHEXYL)PHTHALATE	42/52	35 - 160000	370 - 11000	8564	RM-SD-SD31-04	46000	C	31000000	44000	410000	-	Y
BUTYLBENZYL PHTHALATE	9/45	50 - 1600	370 - 9700	1039	RM-SD-SD07-01	1600000	N	930000	1000000	2500000	-	N
CARBAZOLE	24/49	30 - 1300	370 - 9700	901	RM-SD-DB05-03	32000	C	-	31000	290000	-	N
CHRYSENE	49/52	52 - 10000	380 - 700	2272	RM-SD-DB05-03, RM-SD-DB05-03	88000	C	-	84000	780000	-	N
DI-N-BUTYL PHTHALATE	8/45	38 - 2000	380 - 9700	1086	RM-SD-SD25-04	780000	N	2300000	1000000	2500000	-	N
DI-N-OCTYL PHTHALATE	11/46	130 - 7300	370 - 9700	1359	RM-SD-SD07-01	160000	N	10000000	1000000	2500000	-	N
DIBENZO(A,H)ANTHRACENE	25/47	51 - 1900	370 - 9700	1002	RM-SD-SD10-01	88	C	-	84	780	-	Y
DIBENZOFURAN	12/46	37 - 640	370 - 9700	963	RM-SD-DB05-03	31000	N	-	270000	2500000	-	N
DIETHYL PHTHALATE	2/42	21 - 850	370 - 9700	1102	RM-SD-DB10-03	6300000	N	2000000	1000000	2500000	-	N
FLUORANTHENE	50/52	72 - 23000	380 - 700	4395	RM-SD-DB05-03	310000	N	-	1000000	2500000	-	N
FLUORENE	20/48	74 - 1900	370 - 9700	932	RM-SD-DB05-03	310000	N	-	1000000	2500000	-	N
INDENO(1,2,3-CD)PYRENE	43/52	37 - 5600	370 - 9700	1192	RM-SD-SD10-01	880	C	-	840	7800	-	Y
N-NITROSODIPHENYLAMINE	5/46	65 - 380	370 - 9700	1031	OU3-B2-SD10-0002	130000	C	-	130000	1200000	-	N
NAPHTHALENE	9/45	26 - 230	370 - 9700	1003	RM-SD-DB05-03	160000	N	-	1000000	2500000	-	N
PENTACHLOROPHENOL	1/42	150 - 150	910 - 24000	2709	RM-SD-DB05-03	5300	C	-	5100	48000	-	N
PHENANTHRENE	39/52	44 - 15000	380 - 9700	1993	RM-SD-DB05-03	-	-	-	1000000	2500000	-	N
PHENOL	5/43	130 - 440	370 - 9700	1054	OU3-B2-SD05-0002	4700000	N	-	1000000	2500000	-	N

TABLE 6-13 (continued)
SELECTION OF CHEMICALS OF POTENTIAL CONCERN
AREA B, WETLANDS ALONG LOCKWOOD AVE.
SURFACE SOIL/SEDIMENT
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	COPC Screening Level (1)	N/C (2)	SSL Inhalation (3)	State Residential Direct Exposure (4)	State Industrial Direct Exposure (4)	Background Concentration (5)	Select As COPC? (6)
PYRENE	50/52	61 - 18000	380 - 700	3393	RM-SD-SD10-01	230000	N	-	1000000	2500000	-	N
Pesticides/PCBs (ug/kg)												
4,4'-DDD	32/62	0.48 - 38	3.3 - 77	8	RM-SD-DB04-03	2700	C	-	2600	24000	-	N
4,4'-DDE	45/63	0.12 - 45	3.3 - 77	5	DBL017	1900	C	-	1800	17000	-	N
4,4'-DDT	28/61	0.27 - 89.2	3.3 - 77	9	DBL017	1900	C	-	1800	17000	-	N
ALDRIN	32/62	0.05 - 8.3	0.87 - 40	2	OU3-B2-SD07-0002	38	C	3000	36	340	-	N
ALPHA-BHC	19/63	0.14 - 2.7	0.87 - 40	2	RM-SD-SD10-04	100	C	800	97	910	-	N
ALPHA-CHLORDANE	38/62	0.05 - 23	0.94 - 40	5	RM-SD-SD09-02	1800	C	20000	490	2200	-	N
AROCLOR-1242	1/63	700 - 700	17 - 750	50	RM-SD-SD11-01	320	C	-	1000	10000	-	Y
AROCLOR-1248	1/62	2300 - 2300	17 - 750	71	SD-04	320	C	-	1000	10000	-	Y
AROCLOR-1254	3/62	70 - 4900	17 - 750	129	RM-SD-DB05-03	160	N	-	1000	10000	-	Y
AROCLOR-1260	1/62	2400 - 2400	17 - 3100	92	SD-04	320	C	-	1000	10000	-	Y
AROCLOR-1262	35/62	28 - 3700	18 - 160	394	SD-04	320	C	-	1000	10000	-	Y
AROCLOR-1268	48/64	33 - 6700	18 - 160	510	SD-04	320	C	-	1000	10000	-	Y
BETA-BHC	7/57	0.18 - 3.8	1.7 - 40	2	RM-SD-SD07-04	350	C	-	340	3200	-	N
DELTA-BHC	4/62	0.69 - 1.8	0.94 - 40	2	OU3-B2-SD06-0002	-	-	-	97	910	-	N
DIELDRIN	40/62	0.11 - 80	1.9 - 77	6	DBL017	40	C	1000	38	360	-	Y
ENDOSULFAN I	3/61	9.6 - 18	0.87 - 40	3	RM-SD-SD07-04	47000	N	-	410000	1200000	-	N
ENDOSULFAN II	7/56	1.9 - 25	3.3 - 77	5	RM-SD-SD28-04	47000	N	-	410000	1200000	-	N
ENDOSULFAN SULFATE	7/60	0.24 - 12	1.7 - 36	3	RM-SD-SD09-02	-	-	-	410000	1200000	-	N
ENDRIN	14/62	0.35 - 25	3.3 - 77	5	OU3-B2-SD07-0002	2300	N	-	20000	610000	-	N
ENDRIN ALDEHYDE	18/60	0.39 - 59	1.7 - 77	8	RM-SD-SD20-04	-	-	-	20000	610000	-	N
ENDRIN KETONE	6/62	0.33 - 6.9	3.3 - 77	4	OU3-B2-SB08-0002	-	-	-	20000	610000	-	N
GAMMA-BHC (LINDANE)	19/62	0.06 - 6.7	0.87 - 40	2	RM-SD-SD09-02	490	C	-	20000	610000	-	N
GAMMA-CHLORDANE	44/58	0.12 - 23	1.7 - 40	5	SD-05	1800	C	20000	490	2200	-	N
HEPTACHLOR	8/61	0.07 - 2.3	0.87 - 40	2	RM-SD-SD07-01	140	C	100	140	1300	-	N
HEPTACHLOR EPOXIDE	23/58	0.05 - 4.5	0.87 - 40	2	OU3-B2-SD07-0002	70	C	5000	67	630	-	N
METHOXYCHLOR	3/61	1.5 - 160	8.7 - 400	22	RM-SD-SD11-01	39000	N	-	340000	10000000	-	N
Metals (mg/kg)												
ALUMINUM	64/64	3060 - 22500	-	12203	HR28	7800	N	-	-	-	22600	N(7)
ANTIMONY	7/61	3.3 - 18.9	1.3 - 23.3	5	RM-SD-DB01-03	3 1	N	-	27	8200	ND	Y
ARSENIC	59/64	1.5 - 18.6	1.6 - 6.4	7	RM-SD-DB03-03	0.43	C	750	10	10	11.6	Y
BARIUM	64/64	7.6 - 2900	-	267	RM-SD-DB03-03	550	N	690000	4700	140000	329	Y
BERYLLIUM	33/62	0.23 - 2.1	0.18 - 1.9	1	HR28	16	C	1300	2	2	1.3	Y
CADMIUM	31/64	0.51 - 13.3	0.4 - 6.1	3	OU3-B2-SD05-0002	7 8	N	1800	34	1000	1.4	Y
CALCIUM	52/64	470 - 15900	1410 - 4200	4180	OU3-B2-SD08-0002	-	-	-	-	-	7420	N
CHROMIUM	60/64	9 - 799	32.7 - 146	150	RM-SD-DB03-03	23	N	270	100	100	35.2	Y
COBALT	64/64	2.8 - 19.9	-	10	HR28	470	N	-	1000	2500	12.4	N
COPPER	61/72	17 - 2360	52.2 - 356	434	RM-SD-SD28-04	310	N	-	2500	76000	123	Y
IRON	64/64	7230 - 46200	-	24906	RM-SD-DB03-03	2300	N	-	-	-	24100	N(7)
LEAD	137/144	11.1 - 6590	100 - 250	558	SA654A N153,E164 (0.8-1.0)	400	N	-	500	1000	344	Y
MAGNESIUM	64/64	2030 - 20900	-	7722	RM-SD-SD28-04	-	-	-	-	-	5690	N
MANGANESE	64/64	77.6 - 1080	-	314	HR28	160	N	-	1600	47000	660	Y

TABLE 6-13 (continued)
SELECTION OF CHEMICALS OF POTENTIAL CONCERN
AREA B, WETLANDS ALONG LOCKWOOD AVE.
SURFACE SOIL/SEDIMENT
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	COPC Screening Level (1)	N/C (2)	SSL Inhalation (3)	State Residential Direct Exposure (4)	State Industrial Direct Exposure (4)	Background Concentration (5)	Select As COPC? (6)
MERCURY	41/63	0.21 - 2.7	0.1 - 0.75	1	HR25, RM-SD-SD28-04	2.3	N	10	20	610	0.28	Y
NICKEL	64/64	7.1 - 177	-	43	OU3-B2-SD05-0002	160	N	13000	1400	7500	40.4	Y
POTASSIUM	53/64	327 - 6290	1140 - 3590	2870	HR28	-	-	-	-	-	2680	N
SELENIUM	9/62	0.25 - 3.7	0.22 - 16.3	1	DBL027	39	N	-	340	10000	3.3	N
SILVER	19/61	1.1 - 6.4	0.45 - 4.4	2	HR25, HR27	39	N	-	340	10000	3.3	N
SODIUM	61/64	182 - 25600	146 - 790	8238	OU3-B2-SD11-0002	-	-	-	-	-	248	N
THALLIUM	1/62	0.96 - 0.96	0.24 - 8.4	1	SD-04	0.55	N	-	5.4	160	ND	Y
VANADIUM	57/64	9.7 - 140	23.8 - 79	41	RM-SD-DB03-03	55	N	-	470	14000	81.9	Y
ZINC	63/64	43.2 - 1550	730 - 730	356	OU3-B2-SD05-0002	2300	N	-	20000	610000	604	N
Dioxin (ug/kg)												
TOXICITY EQUIVALENCY FACTOR	39/39	0.0012 - 0.348	-	0.0520	RM-SD-DB01-03	0.0043	C	-	-	-	-	Y
Asbestos (%)												
ASBESTOS	39/87	0.99 - 50	0.1 - 0.1	3	DBL-008, DBL-009	1	C	-	-	-	-	Y
Total Organic Carbon (mg/kg)												
TOTAL ORGANIC CARBON	8/8	4410 - 262000	-	63916	OU3-B2-SD05-0002	-	-	-	-	-	-	N

Notes:

1) Based on current USEPA Region III guidance (USEPA Region III, 10-1-99). Residential Soil Ingestion is used for soil and sediment. Value for noncarcinogens is based on a target hazard quotient of O.I. Value for carcinogens is based on a cancer risk of IE-6.
2) COPC screening level based on noncarcinogenic (N)/carcinogenic (C) effects.
3) USEPA Soil Screening Levels (USEPA, May 1996).
4) CTDEP, January 1996. In some cases, calculated or surrogate or ceiling value presented as detailed in Table 6-1.
5) Maximum background concentrations presented for inorganics only because background concentrations for organics were not used in COPC selection.
6) COPC selection criteria discussed in Section 6.2 and presented/defined in Table 6-1. Chemical was selected as a COPC (Y = yes) if maximum detected concentration exceeded screening levels, except that noncarcinogenic inorganics detected at concentrations exceeding screening levels (based on Region III criteria) but less than Region III risk-based concentrations AND maximum background concentration were not selected as COPCs.
7) USEPA Region I does not advocate quantitative risk assessment of aluminum or iron.
8) Value is based on OSWER soil screening level for residential land use (USEPA, July 1994).

ND Compound was not present at detectable concentrations in background samples.
- Not available or not applicable.

TABLE 6-14
SELECTION OF CHEMICALS OF POTENTIAL CONCERN
AREA B, WETLANDS ALONG LOCKWOOD AVE.
ALL SOIL/SEDIMENT (0-15')
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	COPC Screening Level (1)	N/C (2)	SSL Inhalation (3)	State Residential Direct Exposure (4)	State Industrial Direct Exposure (4)	Background Concentration (5)	Select As COPC? (6)
Volatile Organic Compounds (ug/kg)												
1,1,1-TRICHLOROETHANE	1/53	7 - 7	11 - 290	15	RM-SD-SD20-04	160000	N	1200000	500000	1000000	-	N
1,1-DICHLOROETHANE	6/56	4 - 90	11 - 290	16	RM-SD-SD20-04	780000	N	1300000	500000	1000000	-	N
1,2-DICHLOROETHENE (TOTAL)	2/54	4 - 16	11 - 290	15	RM-SD-SD10-01	70000	N	1200000	500000	1000000	-	N
2-BUTANONE	13/57	13 - 1300	11 - 290	67	RM-SD-DB04-03, OU3-B2-SD07-0002	4700000	N	-	500000	1000000	-	N
ACETONE	11/57	13 - 4100	11 - 290	159	OU3-B2-SD07-0002	780000	N	100000000	500000	1000000	-	N
BENZENE	3/53	3 - 81	11 - 280	15	RM-SD-SD20-04	22000	C	800	21000	200000	-	N
CARBON DISULFIDE	25/55	3 - 290	11 - 290	28	RM-SD-SD9D-03	780000	N	720000	500000	1000000	-	N
CHLOROBENZENE	4/54	4 - 260	11 - 280	17	OU3-B2-SD02-0204	160000	N	130000	500000	1000000	-	N
CHLOROMETHANE	1/54	5 - 5	11 - 290	15	RM-SD-SD10-01	49000	C		47000	440000	-	N
STYRENE	1/54	10 - 10	11 - 290	15	RM-SD-DB04-03	1600000	N	1500000	500000	1000000	-	N
TOLUENE	1/55	28 - 28	11 - 290	15	RM-SD-DB04-03	1600000	N	650000	500000	1000000	-	N
VINYL CHLORIDE	1/53	10 - 10	11 - 290	15	RM-SD-SD20-04	340	C	30	320	3000	-	N
XYLENES, TOTAL	3/54	4 - 26	11 - 290	15	OU3-B2-SD04-0204	16000000	N	410000	500000	1000000	-	N
Semivolatile Organic Compounds (ug/kg)												
2,4-DIMETHYLPHENOL	5/62	33 - 4100	330 - 9700	914	OU3-B2-SB09-0204	160000	N	-	1000000	2500000	-	N
2-METHYLNAPHTHALENE	14/68	35 - 850	330 - 9700	804	RM-SD-DB10-03	160000	N	-	1000000	2500000	-	N
2-METHYLPHENOL	1/62	680 - 680	330 - 9700	897	OU3-B2-SB09-0204	390000	N	-	1000000	2500000	-	N
4-BROMOPHENYL PHENYL ETHER	1/62	190 - 190	330 - 9700	891	SA674AC-N37,E103(1.5-2.2)	450000	N	-	500000	1000000	-	N
4-METHYLPHENOL	9/64	34 - 1400	330 - 9700	844	OU3-B2-SB09-0204	39000	N	-	340000	2500000	-	N
ACENAPHTHENE	23/70	40 - 1900	330 - 9700	768	RM-SD-SD20-04	470000	N	-	1000000	2500000	-	N
ACENAPHTHYLENE	42/74	28 - 4300	330 - 9700	895	OU3-B2-SB04-0406	-	-	-	1000000	2500000	-	N
ANTHRACENE	44/76	33 - 3700	350 - 9700	873	RM-SD-DB05-03	2300000	N	-	1000000	2500000	-	N
BENZO(A)ANTHRACENE	68/80	33 - 10000	330 - 9700	1644	RM-SD-DB05-03, RM-SD-DB05-03	880	C	-	1000	7800	-	Y
BENZO(A)PYRENE	64/80	42 - 13000	330 - 9700	1553	OU3-B2-SB04-0406	88	C	-	1000	1000	-	Y
BENZO(B)FLUORANTHENE	72/80	30 - 14000	330 - 700	2575	RM-SD-SD10-01, RM-SD-SD10-01	880	C	-	1000	7800	-	Y
BENZO(G,H,I)PERYLENE	46/76	23 - 5300	330 - 9700	971	OU3-B2-SB06-0204	-	-	-	1000000	2500000	-	N
BENZO(K)FLUORANTHENE	48/78	23 - 5700	330 - 9700	1279	RM-SD-DB05-03	8800	C	-	8400	78000	-	N
BIS(2-ETHYLHEXYL)PHTHALATE	62/81	35 - 160000	330 - 11000	7193	RM-SD-SD31-04	46000	C	31000000	44000	410000	-	Y
BUTYLBENZYL PHTHALATE	10/66	50 - 1600	330 - 9700	838	RM-SD-SD07-01	1600000	N	930000	1000000	2500000	-	N
CARBAZOLE	33/71	30 - 1300	330 - 9700	719	RM-SD-DB05-03	32000	C	-	31000	290000	-	N
CHRYSENE	72/80	43 - 15000	330 - 700	2057	OU3-B2-SB04-0406, OU3-B2-SB04-0406	88000	C	-	84000	780000	-	N
DI-N-BUTYL PHTHALATE	13/67	38 - 2000	330 - 9700	849	RM-SD-SD25-04	780000	N	2300000	1000000	2500000	-	N
DI-N-OCTYL PHTHALATE	15/69	120 - 7300	330 - 9700	1136	RM-SD-SD07-01	160000	N	10000000	1000000	2500000	-	N
DIBENZO(A,H)ANTHRACENE	36/70	32 - 1900	330 - 9700	772	RM-SD-SD10-01	88	C	-	84	780	-	Y
DIBENZOFURAN	18/68	37 - 1600	330 - 9700	793	SA674AC-N27,E68(5.0-6.6)	31000	N	-	270000	2500000	-	N
DIETHYL PHTHALATE	2/62	21 - 850	330 - 9700	881	RM-SD-DB10-03	6300000	N	2000000	1000000	2500000	-	N
DIMETHYL PHTHALATE	3/64	73 - 2900	330 - 9700	916	OU3-B2-SB09-0204	78000000	N	-	1000000	2500000	-	N
FLUORANTHENE	74/80	36 - 23000	330 - 700	3813	RM-SD-DB05-03	310000	N	-	1000000	2500000	-	N
FLUORENE	33/74	38 - 1900	330 - 9700	716	RM-SD-DB05-03	310000	N	-	1000000	2500000	-	N
INDENO(1,2,3-CD)PYRENE	63/78	36 - 5600	330 - 9700	995	RM-SD-SD10-01	880	C	-	840	7800	-	Y
N-NITROSODIPHENYLAMINE	10/70	65 - 2500	330 - 9700	852	OU3-B2-SD06-0507	130000	C	-	130000	1200000	-	N
NAPHTHALENE	17/69	26 - 2800	330 - 9700	815	SA674AC-N27,E68(5.0-6.6)	160000	N	-	1000000	2500000	-	N
PENTACHLOROPHENOL	2/62	150 - 200	830 - 24000	2134	OU3-B2-SB02-0406	5300	C	-	5100	48000	-	N
PHENANTHRENE	62/80	44 - 15000	330 - 9700	1810	RM-SD-DB05-03	-	-	-	1000000	2500000	-	N
PHENOL	12/66	130 - 1200	330 - 9700	860	OU3-B2-SB09-0204	4700000	N	-	1000000	2500000	-	N

TABLE 6-14 (continued)
SELECTION OF CHEMICALS OF POTENTIAL CONCERN
AREA B, WETLANDS ALONG LOCKWOOD AVE.
ALL SOIL/SEDIMENT (0-15')
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	COPC Screening Level (1)	N/C (2)	SSL Inhalation (3)	State Residential Direct Exposure (4)	State Industrial Direct Exposure (4)	Background Concentration (5)	Select As COPC? (6)
PYRENE	73/80	61 - 20000	330 - 700	2977	OU3-B2-SB04-0406	230000	N	-	1000000	2500000	-	N
Pesticides/PCBs (ug/kg)												
4,4'-DDD	42/91	0.48 - 2100	2 - 430	35	OU3-B2-SB04-0406	2700	C	-	2600	24000		N
4,4'-DDE	50/93	0.12 - 45	2 - 430	8	DBL017	1900	C	-	1800	17000	-	N
4,4'-DDT	38/91	0.27 - 160	2.9 - 430	15	OU3-B2-SB04-0406	1900	C	-	1800	17000	-	N
ALDRIN	37/92	0.05 - 22	0.87 - 220	4	OU3-B2-SD04-0204	38	C	3000	36	340	-	N
ALPHA-BHC	21/93	0.14 - 3.05	0.87 - 220	3	OU3-B2-SD04-0204	100	C	800	97	910	-	N
ALPHA-CHLORDANE	45/92	0.05 - 1200	0.94 - 40	18	OU3-B2-SB02-0406	1800	C	20000	490	2200	-	Y
AROCLOR-1242	1/93	700 - 700	17 - 4300	74	RM-SD-SD11-01	320	C	-	1000	10000	-	Y
AROCLOR-1248	3/92	280 - 2300	17 - 4300	106	SD-04	320	C	-	1000	10000	-	Y
AROCLOR-1254	5/92	70 - 77000	17 - 750	946	OU3-B2-SB02-0406	160	N	-	1000	10000	-	Y
AROCLOR-1260	1/92	2400 - 2400	17 - 4300	103	SD-04	320	C	-	1000	10000	-	Y
AROCLOR-1262	45/92	28 - 10000	18 - 4400	635	OU3-B2-SD04-0204	320	C	-	1000	10000	-	Y
AROCLOR-1268	64/94	20 - 11000	18 - 4400	802	OU3-B2-SD04-0204	320	C	-	1000	10000	-	Y
BETA-BHC	7/78	0.18 - 3.8	1.7 - 220	4	RM-SD-SD07-04	350	C	-	340	3200	-	N
DELTA-BHC	5/92	0.69 - 2.4	0.94 - 220	4	OU3-B2-SD08-0406	-	-	-	97	910	-	N
DIELDRIN	50/92	0.11 - 2600	1.7 - 77	37	OU3-B2-SB02-0406	40	C	1000	38	360	-	Y
ENDOSULFAN I	5/91	0.88 - 18	0.87 - 220	4	RM-SD-SD07-04	47000	N	-	410000	1200000	-	N
ENDOSULFAN II	7/77	1.9 - 25	3.3 - 430	8	RM-SD-SD28-04	47000	N	-	410000	1200000	-	N
ENDOSULFAN SULFATE	9/90	0.24 - 16	1.7 - 430	6	OU3-B2-SB06-0204	-		-	410000	1200000	-	N
ENDRIN	20/92	0.35 - 60	2 - 430	8	OU3-B2-SD04-0204	2300	N	-	20000	610000	-	N
ENDRIN ALDEHYDE	23/90	0.36 - 59	1.7 - 430	10	RM-SD-SD20-04	-	-	-	20000	610000	-	N
ENDRIN KETONE	7/92	0.33 - 11.5	1.7 - 430	7	OU3-B2-SD04-0204	-	-	-	20000	610000	-	N
GAMMA-BHC (LINDANE)	19/92	0.06 - 6.7	0.87 - 220	4	RM-SD-SD09-02	490	C	-	20000	610000	-	N
GAMMA-CHLORDANE	53/88	0.12 - 63	1.7 - 220	7	OU3-B2-SD01-0204	1800	C	20000	490	2200	-	N
HEPTACHLOR	11/91	0.07 - 2.3	0.87 - 220	3	RM-SD-SD07-01	140	C	100	140	1300	-	N
HEPTACHLOR EPOXIDE	27/88	0.05 - 6.1	0.87 - 220	3	OU3-B2-SD04-0204	70	C	5000	67	630	-	N
METHOXYCHLOR	3/91	1.5 - 160	8.7 - 2200	36	RM-SD-SD11-01	39000	N	-	340000	10000000	-	N
Metals (mg/kg)												
ALUMINUM	93/93	3060 - 22500	-	12735	OU3-B2-SD04-0204, HR28	7800	N	-	-	-	22600	N(7)
ANTIMONY	14/77	3.3 - 18.9	1.3 - 23.3	5	RM-SD-DB01-03	3.1	N	-	27	8200	ND	Y
ARSENIC	87/93	1.5 - 20.1	0.82 - 6.4	7	OU3-B2-SD04-0204	0.43	C	750	10	10	11.6	Y
BARIUM	93/93	5.1 - 2900	-	326	RM-SD-DB03-03	550	N	690000	4700	140000	329	Y
BERYLLIUM	60/91	0.15 - 2.1	0.18 - 1.9	1	HR28	16	C	1300	2	2	1.3	Y
CADMIUM	50/93	0.22 - 55.5	0.071 - 6.1	3	OU3-B2-SD01-0204	7.8	N	1800	34	1000	1.4	Y
CALCIUM	80/93	470 - 15900	483 - 4200	4216	OU3-B2-SD08-0002	-	-	-	-	-	7420	N
CHROMIUM	89/93	3.6 - 799	32.7 - 146	152	RM-SD-DB03-03	23	N	270	100	100	35.2	Y
COBALT	93/93	1.5 - 20	-	10	OU3-B2-SB02-0406	470	N	-	1000	2500	12.4	N
COPPER	101/146	8.3 - 3450	52.2 - 356	431	OU3-B2-SD01-0204	310	N	-	2500	76000	123	Y
IRON	93/93	3960 - 53700	-	25487	OU3-B2-SD02-0204	2300	N	-	-	-	24100	N(7)
LEAD	200/258	5.3 - 6590	100 - 250	442	SA654A N153,E164 (0.8-1.0)	400(8)	N	-	500	1000	344	Y
MAGNESIUM	93/93	1140 - 20900	-	7934	RM-SD-SD28-04	-	-	-	-	-	5690	N
MANGANESE	93/93	41.2 - 1080	-	312	HR28	160	N	-	1600	47000	660	Y
MERCURY	55/92	0.11 - 2.7	0.06 - 0.75	0.46	RM-SD-SD28-04, HR25	2.3	N	10	20	610	0.28	Y

TABLE 6-14 (continued)
SELECTION OF CHEMICALS OF POTENTIAL CONCERN
AREA B, WETLANDS ALONG LOCKWOOD AVE.
ALL SOIL/SEDIMENT (0-15')
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	COPC Screening Level (1)	N/C (2)	SSL Inhalation (3)	State Residential Direct Exposure (4)	State Industrial Direct Exposure (4)	Background Concentration (5)	Select As COPC? (6)
NICKEL	93/93	2.9 - 381	-	47	OU3-B2-SD01-0204	160	N	13000	1400	7500	40.4	Y
POTASSIUM	82/93	327 - 6290	1140 - 3590	2901	HR28	-	-	-	-	-	2680	N
SELENIUM	15/91	0.25 - 4	0.22 - 16.3	1	OU3-B2-SD02-0204	39	N	-	340	10000	3.3	N
SILVER	34/90	0.39 - 6.4	0.19 - 4.4	1	HR27, HR25	39	N	-	340	10000	3.3	N
SODIUM	89/93	182 - 29000	106 - 790	7754	OU3-B2-SD11-0204	-	-	-	-	-	248	N
THALLIUM	2/91	0.96 - 2.2	0.24 - 8.4	1	OU3-B2-SB03-0608	0.55	N	-	5.4	160	ND	Y
VANADIUM	86/93	7 - 140	23.8 - 79	39	RM-SD-DB03-03	55	N	-	470	14000	81.9	Y
ZINC	92/93	10.4 - 3670	730 - 730	396	OU3-B2-SD01-0204	2300	N	-	20000	610000	604	Y
Dioxin (ug/kg)												
TOXICITY EQUIVALENCY (TEQ)	47/47	0.0005563 - 0.34845	-	0.0483	RM-SD-DB01-03	0.0043	C	-	-	-	-	Y
Asbestos (%)												
ASBESTOS	42/131	0.99 - 50	0.1 - 0.1	2	DBL-008, DBL-009	1	C	-	-	-	-	Y

Notes:
1) Based on current USEPA Region III guidance (USEPA Region III, 10-1-99). Residential Soil Ingestion is used for soil and sediment. Value for noncarcinogens is based on a target hazard quotient of O.I. Value for carcinogens is based on a cancer risk of IE-6.
2) COPC screening level based on noncarcinogenic (N)/carcinogenic (C) effects.
3) USEPA Soil Screening Levels (USEPA, May 1996).
4) CTDEP, January 1996. In some cases, calculated or surrogate or ceiling value presented as detailed in Table 6-1.
5) Maximum background concentrations presented for inorganics only because background concentrations for organics were not used in COPC selection.
6) COPC selection criteria discussed in Section 6.2 and presented/defined in Table 6-1. Chemical was selected as a COPC (Y = yes) if maximum detected concentration exceeded screening levels, except that noncarcinogenic inorganics detected at concentrations exceeding screening levels (based on Region III criteria) but less than Region III risk-based concentrations AND maximum background concentration were not selected as COPCs.
7) USEPA Region I does not advocate quantitative risk assessment of aluminum or iron.
8) Value is based on OSWER soil screening level for residential land use (USEPA, July 14, 1994).

ND Compound was not present at detectable concentrations in background samples.
- Not available or not applicable.

TABLE 6-15A
COMPARISON OF MAXIMUM CONCENTRATION TO GROUNDWATER PROTECTION BENCHMARKS
AREA B, WETLANDS ALONG LOCKWOOD AVE.
SURFACE SOIL/SEDIMENTS
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	SSL Migration To Groundwater (1)	State Pollutant Mobility (GB) (2)
Volatile Organic Compounds (ug/kg)							
1,1,1-TRICHLOROETHANE	1/43	7 - 7	11 - 280	13	RM-SD-SD20-04	2000	40000
1,1-DICHLOROETHANE	6/46	4 - 90	11 - 280	14	RM-SD-SD20-04	23000	14000
1,2-DICHLOROETHENE (TOTAL)	2/44	4 - 16	11 - 280	13	RM-SD-SD10-01	400	14000
2-BUTANONE	11/47	13 - 1300	11 - 46	76	RM-SD-DB04-03, OU3-B2-SD07-0002	-	80000
ACETONE	11/47	13 - 4100	11 - 190	182	OU3-B2-SD07-0002	16000	140000
BENZENE	2/43	3 - 81	11 - 280	15	RM-SD-SD20-04	30	200
CARBON DISULFIDE	19/46	5 - 290	11 - 280	28	RM-SD-SD9D-03	32000	140000
CHLOROBENZENE	3/44	4 - 19	11 - 280	13	RM-SD-SD20-04	1000	20000
CHLOROMETHANE	1/44	5 - 5	11 - 280	13	RM-SD-SD10-01	-	540
STYRENE	1/44	10 - 10	11 - 280	13	RM-SD-DB04-03	4000	20000
TOLUENE	1/45	28 - 28	11 - 280	14	RM-SD-DB04-03	12000	67000
VINYL CHLORIDE	1/43	10 - 10	11 - 280	13	RM-SD-SD20-04	10	400
XYLENES, TOTAL	2/44	4 - 8	11 - 280	13	RM-SD-SD10-01	190000	19500
Semivolatile Organic Compounds (ug/kg)							
2,4-DIMETHYLPHENOL	4/42	33 - 170	370 - 9700	1059	RM-SD-DB01-03	9000	28000
2-METHYLNAPHTHALENE	7/44	35 - 850	370 - 9700	1042	RM-SD-DB10-03	-	56000
4-BROMOPHENYL PHENYL ETHER	1/42	190 - 190	370 - 9700	1116	SA674AC-N37,E103(1.5-2.2)	-	82000
4-METHYLPHENOL	6/43	34 - 850	370 - 9700	1041	RM-SD-DB10-03	-	7000
ACENAPHTHENE	15/46	40 - 1900	370 - 9700	953	RM-SD-SD20-04	570000	84000
ACENAPHTHYLENE	26/49	42 - 4100	370 - 9700	1110	RM-SD-DB05-03	-	84000
ANTHRACENE	27/51	54 - 3700	370 - 9700	1048	RM-SD-DB05-03	12000000	400000
BENZO(A)ANTHRACENE	45/52	75 - 10000	370 - 9700	1896	RM-SD-DB05-03, RM-SD-DB05-03	2000	1000
BENZO(A)PYRENE	41/52	54 - 6800	370 - 9700	1732	RM-SD-SD10-01	8000	1000
BENZO(B)FLUORANTHENE	49/52	64 - 14000	380 - 700	3158	RM-SD-SD10-01, RM-SD-SD10-01	5000	1000
BENZO(G,H,I)PERYLENE	31/51	23 - 4200	370 - 9700	1152	RM-SD-SD10-01	-	40000
BENZO(K)FLUORANTHENE	26/50	64 - 5700	380 - 9700	1512	RM-SD-DB05-03	49000	1000
BIS(2-ETHYLHEXYL)PHTHALATE	42/52	35 - 160000	370 - 11000	8564	RM-SD-SD31-04	3600000	11000
BUTYLBENZYL PHTHALATE	9/45	50 - 1600	370 - 9700	1039	RM-SD-SD07-01	930000	200000
CARBAZOLE	24/49	30 - 1300	370 - 9700	901	RM-SD-DB05-03	600	360
CHRYSENE	49/52	52 - 10000	380 - 700	2272	RM-SD-DB05-03, RM-SD-DB05-03	160000	960
DI-N-BUTYL PHTHALATE	8/45	38 - 2000	380 - 9700	1086	RM-SD-SD25-04	2300000	140000
DI-N-OCTYL PHTHALATE	11/46	130 - 7300	370 - 9700	1359	RM-SD-SD07-01	10000000	20000
DIBENZO(A,H)ANTHRACENE	25/47	51 - 1900	370 - 9700	1002	RM-SD-SD10-01	2000	0 96
DIBENZOFURAN	12/46	37 - 640	370 - 9700	963	RM-SD-DB05-03	-	5600
DIETHYL PHTHALATE	2/42	21 - 850	370 - 9700	1102	RM-SD-DB10-03	470000	1100000
FLUORANTHENE	50/52	72 - 23000	380 - 700	4395	RM-SD-DB05-03	4300000	56000
FLUORENE	20/48	74 - 1900	370 - 9700	932	RM-SD-DB05-03	560000	56000

TABLE 6-15A (continued)
COMPARISON OF MAXIMUM CONCENTRATION TO GROUNDWATER PROTECTION BENCHMARKS
AREA B, WETLANDS ALONG LOCKWOOD AVE.
SURFACE SOIL/SEDIMENTS
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	SSL Migration To Groundwater (1)	State Pollutant Mobility (GB) (2)
INDENO(1,2,3-CD)PYRENE	43/52	37 - 5600	370 - 9700	1192	RM-SD-SD10-01	14000	9 6
N-NITROSODIPHENYLAMINE	5/46	65 - 380	370 - 9700	1031	OU3-B2-SD10-0002	1000	1400
NAPHTHALENE	9/45	26 - 230	370 - 9700	1003	RM-SD-DB05-03	84000	56000
PENTACHLOROPHENOL	1/42	150 - 150	910 - 24000	2709	RM-SD-DB05-03	30	1000
PHENANTHRENE	39/52	44 - 15000	380 - 9700	1993	RM-SD-DB05-03	-	40000
PHENOL	5/43	130 - 440	370 - 9700	1054	OU3-B2-SD05-0002	100000	800000
PYRENE	50/52	61 - 18000	380 - 700	3393	RM-SD-SD10-01	4200000	40000
Pesticides/PCBs (ug/kg)							
4,4'-DDD	32/62	0.48 - 38	3.3 - 77	8	RM-SD-DB04-03	16000	29
4,4'-DDE	45/63	0.12 - 45	3.3 - 77	5	DBL017	54000	21
4,4'-DDT	28/61	0.27 - 89.2	3.3 - 77	9	DBL017	32000	21
ALDRIN	32/62	0.05 - 8.3	0.87 - 40	2	OU3-B2-SD07-0002	500	0 41
ALPHA-BHC	19/63	0.14 - 2.7	0.87 - 40	2	RM-SD-SD10-04	0 5	1 1
ALPHA-CHLORDANE	38/62	0.05 - 23	0.94 - 40	5	RM-SD-SD09-02	10000	66
AROCLOR-1242	1/63	700 - 700	17 - 750	50	RM-SD-SD11-01	-	-
AROCLOR-1248	1/62	2300 - 2300	17 - 750	71	SD-04	-	-
AROCLOR-1254	3/62	70 - 4900	17 - 750	129	RM-SD-DB05-03	-	-
AROCLOR-1260	1/62	2400 - 2400	17 - 3100	92	SD-04	-	-
AROCLOR-1262	35/62	28 - 3700	18 - 160	394	SD-04	-	-
AROCLOR-1268	48/64	33 - 6700	18 - 160	510	SD-04	-	-
BETA-BHC	7/57	0.18 - 3.8	1.7 - 40	2	RM-SD-SD07-04	3	3.9
DELTA-BHC	4/62	0.69 - 1.8	0.94 - 40	2	OU3-B2-SD06-0002	-	1.1
DIELDRIN	40/62	0.11 - 80	1.9 - 77	6	DBL017	4	7
ENDOSULFAN I	3/61	9.6 - 18	0.87 - 40	3	RM-SD-SD07-04	18000	8400
ENDOSULFAN II	7/56	1.9 - 25	3.3 - 77	5	RM-SD-SD28-04	18000	8400
ENDOSULFAN SULFATE	7/60	0.24 - 12	1.7 - 36	3	RM-SD-SD09-02	-	8400
ENDRIN	14/62	0.35 - 25	3.3 - 77	5	OU3-B2-SD07-0002	1000	-
ENDRIN ALDEHYDE	18/60	0.39 - 59	1.7 - 77	8	RM-SD-SD20-04	-	-
ENDRIN KETONE	6/62	0.33 - 6.9	3.3 - 77	4	OU3-B2-SB08-0002	-	-
GAMMA-BHC (LINDANE)	19/62	0.06 - 6.7	0.87 - 40	2	RM-SD-SD09-02	9	40
GAMMA-CHLORDANE	44/58	0.12 - 23	1.7 - 40	5	SD-05	10000	66
HEPTACHLOR	8/61	0.07 - 2.3	0.87 - 40	2	RM-SD-SD07-01	23000	13
HEPTACHLOR EPOXIDE	23/58	0.05 - 4.5	0.87 - 40	2	OU3-B2-SD07-0002	700	20
METHOXYCHLOR	3/61	1.5 - 160	8.7 - 400	22	RM-SD-SD11-01	160000	8000
Metals (mg/kg)							
ALUMINUM	64/64	3060 - 22500	-	12203	HR28	-	-
ANTIMONY	7/61	3.3 - 18.9	1.3 - 23.3	5	RM-SD-DB01-03	5	-
ARSENIC	59/64	1.5 - 18.6	1.6 - 6.4	7	RM-SD-DB03-03	29	-
BARIUM	64/64	7.6 - 2900	-	267	RM-SD-DB03-03	1600	-

TABLE 6-15A (continued)
COMPARISON OF MAXIMUM CONCENTRATION TO GROUNDWATER PROTECTION BENCHMARKS
AREA B, WETLANDS ALONG LOCKWOOD AVE.
SURFACE SOIL/SEDIMENTS
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	SSL Migration To Groundwater (1)	State Pollutant Mobility (GB) (2)
BERYLLIUM	33/62	0.23 - 2.1	0.18 - 1.9	1	HR28	63	-
CADMIUM	31/64	0.51 - 13.3	0.4 - 6.1	3	OU3-B2-SD05-0002	8	-
CALCIUM	52/64	470 - 15900	1410 - 4200	4180	OU3-B2-SD08-0002	-	-
CHROMIUM	60/64	9 - 799	32.7 - 146	150	RM-SD-DB03-03	38	-
COBALT	64/64	2.8 - 19.9	-	10	HR28	-	-
COPPER	61/72	17 - 2360	52.2 - 356	434	RM-SD-SD28-04	-	-
IRON	64/64	7230 - 46200	-	24906	RM-SD-DB03-03	-	-
LEAD	137/144	11.1 - 6590	100 - 250	558	SA654A N153,E164 (0.8-1.0)	-	-
MAGNESIUM	64/64	2030 - 20900	-	7722	RM-SD-SD28-04	-	-
MANGANESE	64/64	77.6 - 1080	-	314	HR28	-	-
MERCURY	41/63	0.21 - 2.7	0.1 - 0.75	1	HR25, RM-SD-SD28-04	2	-
NICKEL	64/64	7.1 - 177	-	43	OU3-B2-SD05-0002	130	-
POTASSIUM	53/64	327 - 6290	1140 - 3590	2870	HR28	-	-
SELENIUM	9/62	0.25 - 3.7	0.22 - 16.3	1	DBL027	5	-
SILVER	19/61	1.1 - 6.4	0.45 - 4.4	2	HR25, HR27	34	-
SODIUM	61/64	182 - 25600	146 - 790	8238	OU3-B2-SD11-0002	-	-
THALLIUM	1/62	0.96 - 0.96	0.24 - 8.4	1	SD-04	0 7	-
VANADIUM	57/64	9.7 - 140	23.8 - 79	41	RM-SD-DB03-03	6000	-
ZINC	63/64	43.2 - 1550	730 - 730	356	OU3-B2-SD05-0002	12000	-
Dioxin (ug/kg)							
TOXICITY EQUIVALENCY FACTOR	39/39	0.0012 - 0.348	-	0.0520	RM-SD-DB01-03	-	-
Asbestos (%)							
ASBESTOS	39/87	0.99 - 50	0.1 - 0.1	3	DBL-008, DBL-009	-	-
Total Organic Carbon (mg/kg)							
TOTAL ORGANIC CARBON	8/8	4410 - 262000	-	63916	OU3-B2-SD05-0002	-	-

Notes:

1) USEPA Soil Screening Levels (USEPA, May 1996). Values associated with dilution and attenuation factor (DAF) of 20 are used.
2) CTDEP, January 1996. State Pollutant Mobility criteria for metals and PCBs are not included since direct comparison of the aqueous SPLP criteria (in ug/L) and the soil analytical results (in ug/kg or mg/kg) cannot be made. TCLP and SPLP results for soil samples are presented in a separate table. In some cases, calculated or surrogate or ceiling value presented as detailed in Table 6-1.

- Not available or not applicable.

TABLE 6-15B
COMPARISON OF MAXIMUM CONCENTRATIONS TO GROUNDWATER PROTECTION BENCHMARKS
AREA B, WETLANDS ALONG LOCKWOOD AVE.
ALL SOIL/SEDIMENT (0-15')
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	SSL Migration To Groundwater (1)	State Pollutant Mobility (GB) (2)
Volatile Organic Compounds (ug/kg)							
1,1,1-TRICHLOROETHANE	1/53	7 - 7	11 - 290	15	RM-SD-SD20-04	2000	40000
1,1-DICHLOROETHANE	6/56	4 - 90	11 - 290	16	RM-SD-SD20-04	23000	14000
1,2-DICHLOROETHENE (TOTAL)	2/54	4 - 16	11 - 290	15	RM-SD-SD10-01	400	14000
2-BUTANONE	13/57	13 - 1300	11 - 290	67	RM-SD-DB04-03, OU3-B2-SD07-0002	-	80000
ACETONE	11/57	13 - 4100	11 - 290	159	OU3-B2-SD07-0002	16000	140000
BENZENE	3/53	3 - 81	11 - 280	15	RM-SD-SD20-04	30	200
CARBON DISULFIDE	25/55	3 - 290	11 - 290	28	RM-SD-SD9D-03	32000	140000
CHLOROBENZENE	4/54	4 - 260	11 - 280	17	OU3-B2-SD02-0204	1000	20000
CHLOROMETHANE	1/54	5 - 5	11 - 290	15	RM-SD-SD10-01	-	540
STYRENE	1/54	10 - 10	11 - 290	15	RM-SD-DB04-03	4000	20000
TOLUENE	1/55	28 - 28	11 - 290	15	RM-SD-DB04-03	12000	67000
VINYL CHLORIDE	1/53	10 - 10	11 - 290	15	RM-SD-SD20-04	10	400
XYLENES, TOTAL	3/54	4 - 26	11 - 290	15	OU3-B2-SD04-0204	190000	19500
Semivolatile Organic Compounds (ug/kg)							
2,4-DIMETHYLPHENOL	5/62	33 - 4100	330 - 9700	914	OU3-B2-SB09-0204	9000	28000
2-METHYLNAPHTHALENE	14/68	35 - 850	330 - 9700	804	RM-SD-DB10-03	-	56000
2-METHYLPHENOL	1/62	680 - 680	330 - 9700	897	OU3-B2-SB09-0204	15000	70000
4-BROMOPHENYL PHENYL ETHER	1/62	190 - 190	330 - 9700	891	SA674AC-N37,E103(1.5-2.2)	-	82000
4-METHYLPHENOL	9/64	34 - 1400	330 - 9700	844	OU3-B2-SB09-0204	-	7000
ACENAPHTHENE	23/70	40 - 1900	330 - 9700	768	RM-SD-SD20-04	570000	84000
ACENAPHTHYLENE	42/74	28 - 4300	330 - 9700	895	OU3-B2-SB04-0406	-	84000
ANTHRACENE	44/76	33 - 3700	350 - 9700	873	RM-SD-DB05-03	12000000	400000
BENZO(A)ANTHRACENE	68/80	33 - 10000	330 - 9700	1644	RM-SD-DB05-03, RM-SD-DB05-03	2000	1000
BENZO(A)PYRENE	64/80	42 - 13000	330 - 9700	1553	OU3-B2-SB04-0406	8000	1000
BENZO(B)FLUORANTHENE	72/80	30 - 14000	330 - 700	2575	RM-SD-SD10-01, RM-SD-SD10-01	5000	1000
BENZO(G,H,I)PERYLENE	46/76	23 - 5300	330 - 9700	971	OU3-B2-SB06-0204	-	40000
BENZO(K)FLUORANTHENE	48/78	23 - 5700	330 - 9700	1279	RM-SD-DB05-03	49000	1000
BIS(2-ETHYLHEXYL)PHTHALATE	62/81	35 - 160000	330 - 11000	7193	RM-SD-SD31-04	3600000	11000
BUTYLBENZYL PHTHALATE	10/66	50 - 1600	330 - 9700	838	RM-SD-SD07-01	930000	200000
CARBAZOLE	33/71	30 - 1300	330 - 9700	719	RM-SD-DB05-03	600	360
CHRYSENE	72/80	43 - 15000	330 - 700	2057	OU3-B2-SB04-0406, OU3-B2-SB04-0406	160000	960
DI-N-BUTYL PHTHALATE	13/67	38 - 2000	330 - 9700	849	RM-SD-SD25-04	2300000	140000
DI-N-OCTYL PHTHALATE	15/69	120 - 7300	330 - 9700	1136	RM-SD-SD07-01	10000000	20000
DIBENZO(A,H)ANTHRACENE	36/70	32 - 1900	330 - 9700	772	RM-SD-SD10-01	2000	0 96
DIBENZOFURAN	18/68	37 - 1600	330 - 9700	793	SA674AC-N27,E68(5.0-6.6)	-	5600
DIETHYL PHTHALATE	2/62	21 - 850	330 - 9700	881	RM-SD-DB10-03	470000	1100000
DIMETHYL PHTHALATE	3/64	73 - 2900	330 - 9700	916	OU3-B2-SB09-0204		14000000
FLUORANTHENE	74/80	36 - 23000	330 - 700	3813	RM-SD-DB05-03	4300000	56000
FLUORENE	33/74	38 - 1900	330 - 9700	716	RM-SD-DB05-03	560000	56000

TABLE 6-15B (continued)
COMPARISON OF MAXIMUM CONCENTRATIONS TO GROUNDWATER PROTECTION BENCHMARKS
AREA B, WETLANDS ALONG LOCKWOOD AVE.
ALL SOIL/SEDIMENT (0-15')
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	SSL Migration To Groundwater (1)	State Pollutant Mobility (GB) (2)
INDENO(1,2,3-CD)PYRENE	63/78	36 - 5600	330 - 9700	995	RM-SD-SD10-01	14000	9.6
N-NITROSODIPHENYLAMINE	10/70	65 - 2500	330 - 9700	852	OU3-B2-SD06-0507	1000	1400
NAPHTHALENE	17/69	26 - 2800	330 - 9700	815	SA674AC-N27,E68(5.0-6.6)	84000	56000
PENTACHLOROPHENOL	2/62	150 - 200	830 - 24000	2134	OU3-B2-SB02-0406	30	1000
PHENANTHRENE	62/80	44 - 15000	330 - 9700	1810	RM-SD-DB05-03	-	40000
PHENOL	12/66	130 - 1200	330 - 9700	860	OU3-B2-SB09-0204	100000	800000
PYRENE	73/80	61 - 20000	330 - 700	2977	OU3-B2-SB04-0406	4200000	40000
Pesticides/PCBs (ug/kg)							
4,4'-DDD	42/91	0.48 - 2100	2 - 430	35	OU3-B2-SB04-0406	16000	29
4,4'-DDE	50/93	0.12 - 45	2 - 430	8	DBL017	54000	21
4,4'-DDT	38/91	0.27 - 160	2.9 - 430	15	OU3-B2-SB04-0406	32000	21
ALDRIN	37/92	0.05 - 22	0.87 - 220	4	OU3-B2-SD04-0204	500	0.41
ALPHA-BHC	21/93	0.14 - 3.05	0.87 - 220	3	OU3-B2-SD04-0204	0.5	1.1
ALPHA-CHLORDANE	45/92	0.05 - 1200	0.94 - 40	18	OU3-B2-SB02-0406	10000	66
AROCLOR-1242	1/93	700 - 700	17 - 4300	74	RM-SD-SD11-01	-	-
AROCLOR-1248	3/92	280 - 2300	17 - 4300	106	SD-04	-	-
AROCLOR-1254	5/92	70 - 77000	17 - 750	946	OU3-B2-SB02-0406	-	-
AROCLOR-1260	1/92	2400 - 2400	17 - 4300	103	SD-04	-	-
AROCLOR-1262	45/92	28 - 10000	18 - 4400	635	OU3-B2-SD04-0204	-	-
AROCLOR-1268	64/94	20 - 11000	18 - 4400	802	OU3-B2-SD04-0204	-	-
BETA-BHC	7/78	0.18 - 3.8	1.7 - 220	4	RM-SD-SD07-04	3	3.9
DELTA-BHC	5/92	0.69 - 2.4	0.94 - 220	4	OU3-B2-SD08-0406	-	1.1
DIELDRIN	50/92	0.11 - 2600	1.7 - 77	37	OU3-B2-SB02-0406	4	7
ENDOSULFAN I	5/91	0.88 - 18	0.87 - 220	4	RM-SD-SD07-04	18000	8400
ENDOSULFAN II	7/77	1.9 - 25	3.3 - 430	8	RM-SD-SD28-04	18000	8400
ENDOSULFAN SULFATE	9/90	0.24 - 16	1.7 - 430	6	OU3-B2-SB06-0204	-	8400
ENDRIN	20/92	0.35 - 60	2 - 430	8	OU3-B2-SD04-0204	1000	-
ENDRIN ALDEHYDE	23/90	0.36 - 59	1.7 - 430	10	RM-SD-SD20-04	-	-
ENDRIN KETONE	7/92	0.33 - 11.5	1.7 - 430	7	OU3-B2-SD04-0204	-	-
GAMMA-BHC (LINDANE)	19/92	0.06 - 6.7	0.87 - 220	4	RM-SD-SD09-02	9	40
GAMMA-CHLORDANE	53/88	0.12 - 63	1.7 - 220	7	OU3-B2-SD01-0204	10000	66
HEPTACHLOR	11/91	0.07 - 2.3	0.87 - 220	3	RM-SD-SD07-01	23000	13
HEPTACHLOR EPOXIDE	27/88	0.05 - 6.1	0.87 - 220	3	OU3-B2-SD04-0204	700	20
METHOXYCHLOR	3/91	1.5 - 160	8.7 - 2200	36	RM-SD-SD11-01	160000	8000
Metals (mg/kg)							
ALUMINUM	93/93	3060 - 22500	-	12735	OU3-B2-SD04-0204, HR28	-	-
ANTIMONY	14/77	3.3 - 18.9	1.3 - 23.3	5	RM-SD-DB01-03	5	-
ARSENIC	87/93	1.5 - 20.1	0.82 - 6.4	7	OU3-B2-SD04-0204	29	-
BARIUM	93/93	5.1 - 2900	-	326	RM-SD-DB03-03	1600	-

TABLE 6-15B (continued)
COMPARISON OF MAXIMUM CONCENTRATIONS TO GROUNDWATER PROTECTION BENCHMARKS
AREA B, WETLANDS ALONG LOCKWOOD AVE.
ALL SOIL/SEDIMENT (0-15')
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	SSL Migration To Groundwater (1)	State Pollutant Mobility (GB) (2)
BERYLLIUM	60/91	0.15 - 2.1	0.18 - 1.9	1	HR28	63	-
CADMIUM	50/93	0.22 - 55.5	0.071 - 6.1	3	OU3-B2-SD01-0204	8	-
CALCIUM	80/93	470 - 15900	483 - 4200	4216	OU3-B2-SD08-0002	-	-
CHROMIUM	89/93	3.6 - 799	32.7 - 146	152	RM-SD-DB03-03	38	-
COBALT	93/93	1.5 - 20	-	10	OU3-B2-SB02-0406	-	-
COPPER	101/146	8.3 - 3450	52.2 - 356	431	OU3-B2-SD01-0204	-	-
IRON	93/93	3960 - 53700	-	25487	OU3-B2-SD02-0204	-	-
LEAD	200/258	5.3 - 6590	100 - 250	442	SA654A N153,E164 (0.8-1.0)	-	-
MAGNESIUM	93/93	1140 - 20900	-	7934	RM-SD-SD28-04	-	-
MANGANESE	93/93	41.2 - 1080	-	312	HR28	-	-
MERCURY	55/92	0.11 - 2.7	0.06 - 0.75	0.5	RM-SD-SD28-04, HR25	2	-
NICKEL	93/93	2.9 - 381	-	47	OU3-B2-SD01-0204	130	-
POTASSIUM	82/93	327 - 6290	1140 - 3590	2901	HR28	-	-
SELENIUM	15/91	0.25 - 4	0.22 - 16.3	1	OU3-B2-SD02-0204	5	-
SILVER	34/90	0.39 - 6.4	0.19 - 4.4	1	HR27, HR25	34	-
SODIUM	89/93	182 - 29000	106 - 790	7754	OU3-B2-SD11-0204	-	-
THALLIUM	2/91	0.96 - 2.2	0.24 - 8.4	1	OU3-B2-SB03-0608	0 7	-
VANADIUM	86/93	7 - 140	23.8 - 79	39	RM-SD-DB03-03	6000	-
ZINC	92/93	10.4 - 3670	730 - 730	396	OU3-B2-SD01-0204	12000	-
Dioxin (ug/kg)							
TOXICITY EQUIVALENCY FACTOR	47/47	0.0005563 - 0.34845	-	0.0483	RM-SD-DB01-03	-	-
Asbestos (%)							
ASBESTOS	42/131	0.99 - 50	0.1 - 0.1	2	DBL-008, DBL-009	-	-

Notes:
1) USEPA Soil Screening Levels (USEPA, May 1996). Values associated with dilution and attenuation factor (DAF) of 20 are used.
2) CTDEP, January 1996. State Pollutant Mobility criteria for metals and PCBs are not included since direct comparison of the aqueous SPLP criteria (in ug/L) and the soil analytical results (in ug/kg or mg/kg) cannot be made. TCLP and SPLP results for soil samples are presented in a separate table. In some cases, calculated or surrogate or ceiling value presented as detailed in Table 6-1.
- Not available or not applicable.

TABLE 6-16
SELECTION OF CHEMICALS OF POTENTIAL CONCERN
AREA B, WETLANDS ALONG LOCKWOOD AVE.
SURFACE WATER
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	COPC Screening Level (1)	N/C (2)	Federal MCL (3)	State MCL (4)	Select As COPC? (5)
Volatiles (ug/L)										
1,1,1-TRICHLOROETHANE	4/26	12 - 160	10 - 10	13	RM-SW-SD20-04	54	N	200	200	Y
1,1-DICHLOROETHANE	3/26	4 - 28	10 - 10	6	RM-SW-SD20-04	81	N	-	-	N
1,1-DICHLOROETHENE	4/26	4 - 50	10 - 10	7	RM-SW-SD20-04	0.044	C	7	7	Y
1,2-DICHLOROETHENE (TOTAL)	4/26	5 - 59	10 - 10	8	RM-SW-SD20-04	5.5	N	70	70	Y
ACETONE	1/26	37 - 37	10 - 10	6	RM-SW-SD19-03	61	N	-	-	N
CHLOROBENZENE	2/26	1 - 3	10 - 10	5	RM-SW-SD20-04	3.9	N	100	100	N
CHLOROFORM	1/26	4 - 4	10 - 10	5	RM-SW-SD20-04	0.15	C	100/80	100	Y
CHLOROMETHANE	1/26	16 - 16	10 - 10	5	RM-SW-SD19-03	1.4	C	-	-	Y
TRICHLOROETHENE	3/26	4 - 49	10 - 20	7	RM-SW-SD20-04	1.6	C	5	5	Y
VINYL CHLORIDE	2/26	5 - 7	10 - 10	5	RM-SW-SD20-04	0.019	C	2	2	Y
Semivolatiles (ug/L)										
BIS(2-ETHYLHEXYL)PHTHALATE	2/26	11.5 - 29	10 - 10	6	RM-SW-SD09-02	4.8	C	6	6	Y
DIETHYL PHTHALATE	1/26	0.6 - 0.6	10 - 10	5	RM-SW-SD20-03	2900	N	-	-	N
FLUORANTHENE	1/26	0.9 - 0.9	10 - 10	5	RM-SW-SD20-03	150	N	-	-	N
PHENANTHRENE	1/26	0.5 - 0.5	10 - 10	5	RM-SW-SD20-03	-	-	-	-	N
PYRENE	1/26	0.6 - 0.6	10 - 10	5	RM-SW-SD20-03	18	N	-	-	N
Pesticides/PCBs (ug/L)										
4,4'-DDD	4/26	0.002 - 0.004	0.1 - 0.1	0.04	RM-SW-SD09-04	0.28	C	-	-	N
ALDRIN	1/26	0.0007 - 0.0007	0.05 - 0.05	0.02	RM-SW-SD20-04	0.004	C	-	-	N
DIELDRIN	2/26	0.0007 - 0.0255	0.05 - 0.1	0.04	RM-SW-SD19-04	0.0042	C	-	-	Y
ENDOSULFAN II	1/26	0.004 - 0.004	0.1 - 0.1	0.05	RM-SW-SD20-03	22	N	-	-	N
ENDOSULFAN SULFATE	1/26	0.012 - 0.012	0.1 - 0.1	0.05	RM-SW-SD20-03	-	-	-	-	N
ENDRIN ALDEHYDE	1/26	0.006 - 0.006	0.1 - 0.1	0.05	RM-SW-SD19-03	-	-	-	-	N
ENDRIN KETONE	1/26	0.002 - 0.002	0.1 - 0.1	0.05	RM-SW-SD09-03	-	-	-	-	N
GAMMA-BHC (LINDANE)	1/26	0.013 - 0.013	0.05 - 0.05	0.02	RM-SW-SD19-04	0.052	C	0.2	0.2	N
GAMMA-CHLORDANE	1/26	0.004 - 0.004	0.05 - 0.05	0.02	RM-SW-SD31-04	0.19	C	2	2	N
HEPTACHLOR	1/26	0.002 - 0.002	0.05 - 0.05	0.02	RM-SW-SD08-01	0.0023	C	0.4	0.4	N
HEPTACHLOR EPOXIDE	2/26	0.0008 - 0.002	0.05 - 0.05	0.02	RM-SW-SD37-04	0.0012	C	0.2	0.2	Y
METHOXYCHLOR	2/26	0.007 - 0.03	0.1 - 0.5	0.2	RM-SW-SD08-01	18	N	40	40	N

TABLE 6-16 (continued)
SELECTION OF CHEMICALS OF POTENTIAL CONCERN
AREA B, WETLANDS ALONG LOCKWOOD AVE.
SURFACE WATER
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	COPC Screening Level (1)	N/C (2)	Federal MCL (3)	State MCL (4)	Select As COPC? (5)
Inorganics (ug/L)										
ALUMINUM	6/26	31.6 - 792	34.6 - 219	94	RM-SW-SD08-02	3700	N	-	-	N[6]
ANTIMONY	3/26	15 - 27.4	5 - 40.9	10	RM-SW-SD28-04	1 5	N	6	6	Y
ARSENIC	9/26	3.9 - 93.4	1.8 - 66	15	RM-SW-SD37-04	0 045	C	50	50	Y
BARIUM	23/26	5.5 - 52.1	8.9 - 10.2	15	RM-SW-SD20-04	260	N	2000	2000	N
CALCIUM	25/26	9670 - 319000	241000 - 241000	189299	RM-SW-SD09-01	-	-	-	-	N
CHROMIUM	15/26	7.7 - 16.4	3.2 - 5	8	RM-SW-SD31-04	11	N	100	100	Y
COBALT	1/26	9.5 - 9.5	2 - 3.4	2	RM-SW-SD09-03	220	N	-	-	N
COPPER	4/26	18.3 - 65.4	3 - 52.4	15	RM-SW-SD20-03	150	N	1300	-	N
IRON	20/26	133 - 1570	38.4 - 190	321	RM-SW-SD08-02	1100	N	-	-	N[6]
LEAD	8/26	2.3 - 16.7	1.1 - 42	8	RM-SW-SD20-03	-	-	15	-	Y
MAGNESIUM	26/26	17300 - 922000	-	599669	RM-SW-SD32-04	-	-	-	-	N
MANGANESE	26/26	4.9 - 976	-	141	RM-SW-SD20-04	73	N	-	-	Y
MERCURY	10/26	0.27 - 1.95	0.1 - 0.2	0.4	RM-SW-SD19-04	1 1	N	2	2	Y
POTASSIUM	26/26	7330 - 337000	-	202082	RM-SW-SD08-02	-	-	-	-	N
SELENIUM	2/26	2.6 - 3.3	2.5 - 50	8	RM-SW-SD28-04	18	N	50	50	N
SODIUM	26/26	144000 - 8720000	-	5048192	RM-SW-SD31-04	-	-	-	28000[7]	N
THALLIUM	2/26	7.7 - 9.1	2.7 - 104	17	RM-SW-SD19-04	0 26	N	2	2	Y
VANADIUM	7/26	2.4 - 4.6	2 - 10.9	2	RM-SW-SD31-04	26	N	-	-	N
ZINC	5/18	27.7 - 179	4.5 - 31.4	28	RM-SW-SD20-03	1100	N	-	-	N

Notes:

1) Based on current USEPA Region III guidance (USEPA Region III, 10-1-99). Value for noncarcinogens is based on a target hazard quotient of 0.1. Value for carcinogens is based on a cancer risk of IE-6.
2) COPC screening level based on noncarcinogenic (N)/carcinogenic (C) effects.
3) Maximum Contaminant Level (USEPA, October 1996). Values presented for lead and copper are action levels.
4) Title 19, Health and Safety, the Public Health Code of the State of Connecticut, Chapter 11 Environmental Health.
5) Chemical selected as COPC if maximum detected concentration exceeds screening levels or MCLs.
6) USEPA Region I does not advocate quantitative risk assessment of the health effects of this metal due to lack of an adequate toxicity criteria.
7) This is a state notification level and is not risk based.

- Not available or not applicable.

TABLE 6-17
SELECTION OF CHEMICALS OF POTENTIAL CONCERN
AREA B, WETLANDS ALONG LOCKWOOD AVE.
BIOTA
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	COPC Screening Level (1)	N/C (2)	Select As COPC? (3)
MUSSEL								
Semivolatiles (ug/kg)								
BENZO(A)ANTHRACENE	1/5	10 - 10	10 - 10	6.0000	FC01-8248	4.3	C	Y
BENZO(B)FLUORANTHENE	1/5	15 - 15	10 - 10	7.0000	FC01-8248	4.3	C	Y
CHRYSENE	5/5	5.98 - 11.3	-	7.5380	FC01-8248	430	C	N
Pesticides/PCBs (mg/kg)								
AROCLOR-1254	6/6	0.0034 - 0.0084	-	0.0071	FC10-8039/253/282	0.0016	C	Y
Inorganics (mg/kg)								
CADMIUM	6/6	0.463 - 1.04	-	0.6692	FC08-8284	0.14	N	Y
LEAD	6/6	0.102 - 0.353	-	0.1637	FC09-8263	-	-	N
MERCURY	6/6	0.0172 - 0.048	-	0.0328	FC06-8294	0.014	N	Y
NICKEL	6/6	0.215 - 0.593	-	0.3928	FC06-8294	2.7	N	N
OYSTER								
Semivolatiles (ug/kg)								
BENZO(B)FLUORANTHENE	2/9	10 - 11	10 - 10	6.2222	FC01-8244	4.3	C	Y
CHRYSENE	7/9	4.52 - 10.3	10 - 10	6.8322	FC01-8244; FC11-8262	430	C	N
Pesticides/PCBs (mg/kg)								
AROCLOR-1254	10/10	0.0063 - 0.015	-	0.0088	FC04-8043	0.0016	C	Y
Inorganics (mg/kg)								
CADMIUM	7/7	0.473 - 1.18	-	0.7294	FC06-8295	0.14	N	Y
LEAD	7/7	0.029 - 0.266	-	0.1777	FC10-8256	-	-	N
MERCURY	7/7	0.0231 - 0.0485	-	0.0332	FC09-8042	0.014	N	Y
NICKEL	7/7	0.31 - 0.628	-	0.4646	FC10-8256	2.7	N	N

Notes:

1) Based on current USEPA guidance (USEPA Region III, 10-1-98). Value for noncarcinogens based on a target hazard of 0.1. Values for carcinogens are based on a cancer risk of 1E-6.

2) COPC screening level based on noncarcinogenic (N)/carcinogenic (C) effects.

3) Chemical was selected (Y =Yes; N = No) if maximum detected concentration exceeds screening levels.

TABLE 6-18
SELECTION OF RECEPTORS AND EXPOSURE PATHWAYS
AREA B, WETLANDS ALONG LOCKWOOD AVE.
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current/Future	Soils, Sediments, & Wetland Soils	Soils, Sediments, & Wetland Soils	Exposed Surface Soils, Sediments, & Wetland Soils in Creek & River and wetland area north and east of Ferry Creek	Wetland/Marsh Receptor	Adult	Ingestion	Quant	Limited recreational activities are assumed to occur in the creek, river, and riverbanks of Area B only. Adults may be exposed to contaminated soil/sediment through inadvertent contact.
						Dermal	Quant	Limited recreational activities may occur in the creek, river, and riverbanks of Area B only. Adults may be exposed to contaminated soil/sediment through inadvertent contact.
						Inhalation	Qual	Inhalation exposures represent a relatively minor exposure relative to dermal and ingestion pathways. A qualitative comparison of site soil data to USEPA Generic SSLs will be performed.
					Pre-adolescent	Ingestion	Quant	Limited recreational activities may occur in the creek, river, and riverbanks of Area B only. Pre-adolescents may be exposed to contaminated soil/sediment through inadvertent contact.
						Dermal	Quant	Limited recreational activities may occur in the creek, river, and riverbanks of Area B only. Pre-adolescents may be exposed to contaminated soil/sediment through inadvertent contact.
						Inhalation	Qual	Inhalation exposures represent a relatively minor exposure relative to dermal and ingestion pathways. A qualitative comparison of site soil data to USEPA Generic SSLs will be performed.
			Exposed Surface Soils, Sediments, & Wetland Soils in Wetlands along Lockwood Ave.	Trespasser	Adolescent	Ingestion	Quant	Wetlands along Lockwood Ave. are not attractive for recreational use. Adolescents may trespass on the wetlands and be exposed to contaminated soils/sediments through inadvertent contact.
						Dermal	Quant	Wetlands along Lockwood Ave. are not attractive for recreational use. Adolescents may trespass on the wetlands and be exposed to contaminated soils/sediments through inadvertent contact.
						Inhalation	Qual	Inhalation exposures represent a relatively minor exposure relative to dermal and ingestion pathways. A qualitative comparison of site soil data to USEPA Generic SSLs will be performed.
			Exposed Surface Soils in the commercial area behind houses along Stratford Avenue	Commercial Worker	Adult	Ingestion	Quant	Workers may be currently exposed to contaminated soil through inadvertent contact. Workers are not expected to contact sediment or wetland soils.
						Dermal	Quant	Workers may be currently exposed to contaminated soil through inadvertent contact. Workers are not expected to contact sediment or wetland soils.
						Inhalation	Qual	Inhalation exposures represent a relatively minor exposure relative to dermal and ingestion pathways. A qualitative comparison of site soil data to USEPA Generic SSLs will be performed.

TABLE 6-18 (continued)
SELECTION OF RECEPTORS AND EXPOSURE PATHWAYS
AREA B, WETLANDS ALONG LOCKWOOD AVE.
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current/Future	Surface Water	Surface Water	Surface Water in Ferry Creek and the Mouth of the Housatonic River	Wetland/Marsh Receptor	Adult	Ingestion	Qual	Limited recreational activities may occur in the creek and river. Adults may be exposed to contaminated surface water through inadvertent contact. Exposure is expected to be minimal since limited contact with surface water is anticipated.
						Dermal	Quant	Limited recreational activities may occur in the creek and river. Adults may be exposed to contaminated surface water through inadvertent contact.
						Inhalation	None	Inhalation exposures represent a relatively minor exposure relative to dermal and ingestion pathways.
					Pre-adolescent	Ingestion	Qual	Limited recreational activities may occur in the creek and river. Pre-adolescents may be exposed to contaminated surface water through inadvertent contact. Exposure is expected to be minimal since limited contact with surface water is anticipated.
						Dermal	Quant	Limited recreational activities may occur in the creek and river. Pre-adolescents may be exposed to contaminated surface water through inadvertent contact.
						Inhalation	None	Inhalation exposures represent a relatively minor exposure relative to dermal and ingestion pathways.
			Surface Water in Wetlands along Lockwood Ave.	Trespasser	Adolescent	Ingestion	None	The Wetlands along Lockwood Ave. are relatively dry areas. Exposure to surface water is expected to be minimal, therefore it is not evaluated for this receptor.
						Dermal	None	The Wetlands along Lockwood Ave. are relatively dry areas. Exposure to surface water is expected to be minimal, therefore it is not evaluated for this receptor.
						Inhalation	None	Inhalation exposures represent a relatively minor exposure relative to dermal and ingestion pathways.
				Commercial Worker	Adult	Ingestion	None	Workers are not expected to contact surface water.
						Dermal	None	Workers are not expected to contact surface water.
						Inhalation	None	Workers are not expected to contact surface water.
	Shellfish	Shellfish	Oysters and Mussels	Local Fisher	Adult	Ingestion	Quant	Adults may be exposed to contaminated shellfish obtained from the Housatonic River through direct ingestion.
					Child	Ingestion	None	Anticipated exposure is assumed to be similar to adult receptor, negating the need for duplicate evaluation.

TABLE 6-18 (continued)
SELECTION OF RECEPTORS AND EXPOSURE PATHWAYS
AREA B, WETLANDS ALONG LOCKWOOD AVE.
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Future	Soils, Sediments, & Wetland Soils	Soils, Sediments, & Wetland Soils	All Soils in the commercial area between homes on Stratford Avenue and the Wetlands along Lockwood Ave. regardless of Depth and Pavement	Commercial Worker Area 1	Adult	Ingestion	Quant	In the future contaminated soils currently located at depth and beneath pavement may be brought to the surface, exposing future commercial workers through inadvertent contact.
						Dermal	Quant	In the future contaminated soils currently located at depth and beneath pavement may be brought to the surface, exposing future commercial workers through inadvertent contact.
						Inhalation	Qual	Inhalation exposures represent a relatively minor exposure relative to dermal and ingestion pathways. A qualitative comparison of site soil data to USEPA Generic SSLs will be performed.
			All Soils in the western portion of the wetlands along Lockwood Avenue, regardless of Depth and Pavement	Commercial Worker Area 2	Adult	Ingestion	Quant	Future commercial development may occur for the wetland area along Lockwood Avenue. In the future contaminated soils currently located at depth and beneath pavement may be brought to the surface, exposing future commercial workers through inadvertent contact.
						Dermal	Quant	Future commercial development may occur for the wetland area along Lockwood Avenue. In the future contaminated soils currently located at depth and beneath pavement may be brought to the surface, exposing future commercial workers through inadvertent contact.
						Inhalation	Qual	Inhalation exposures represent a relatively minor exposure relative to dermal and ingestion pathways. A qualitative comparison of site soil data to USEPA Generic SSLs will be performed.
	Surface Water	Surface Water	Surface Water	Commercial Worker	Adult	Ingestion	None	Workers are not expected to contact surface water.
						Dermal	None	Workers are not expected to contact surface water.
						Inhalation	None	Workers are not expected to contact surface water.

Notes:

Quant - Quantitative Analysis

Qual - Qualitative Analysis

TABLE 6-19
EXPOSURE POINT CONCENTRATIONS
AREA B, WETLANDS ALONG LOCKWOOD AVE.
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Chemical of Potential Concern	Commercial Worker [1, 2]						Wetland/Marsh Receptor (Adult and Pre-Adolescent)				Adolescent Trespasser		Local Fisher			
	Surface Soil (0 to 2 Feet bgs) (mg/kg)		All Soil AREA #1 (0 to 15 Feet bgs) (mg/kg)		All Soil AREA #2 (0 to 15 Feet bgs) (mg/kg)		Surface Soil (0 to 2 Feet bgs)/ Sediment/Wetland Material (mg/kg)		Surface Water (ug/L)		Surface Soil (0 to 2 Feet bgs)/ Sediment/Wetland Material (mg/kg)		Oysters (mg/kg)		Mussels (mg/kg)	
	RME	CTE	RME	CTE	RME	CTE	RME	CTE	RME	CTE	RME	CTE	RME	CTE	RME	CTE
Volatile Organic Compounds																
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	16	7.8	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	8	5.7	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA	NA	NA	NA	11	6.5	NA	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA
Chloromethane	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA
Trichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	6	5.2	NA	NA	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	5	5	NA	NA	NA	NA	NA	NA
Semivolatile Organic Compounds																
Benzo(a)anthracene	0.19	0.19	0.78	0.26	10	1.9	3	3	NA	NA	6.1	6.1	NA	NA	0.01	0.006
Benzo(a)pyrene	0.18	0.18	0.49	0.20	7.1	7.1	3.1	3.1	NA	NA	4	4	NA	NA	NA	NA
Benzo(b)fluoranthene	0.34	0.20	1.0	0.29	13	2.4	5.4	5.4	NA	NA	10	2.5	0.011	0.006	0.015	0.007
Bis(2-ethylhexyl)phthalate	ND	ND	0.061	0.061	0.8	0.8	39	12	11	6.5	5.1	5.1	NA	NA	NA	NA
Dibenzo(a,h)anthracene	ND	ND	0.072	0.072	0.62	0.62	1.8	1.5	NA	NA	0.73	0.73	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	0.12	0.12	0.28	0.17	2	2	2.2	1.5	NA	NA	1.7	0.65	NA	NA	NA	NA
Pesticides/PCBs																
Aroclor-1242	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	NA	NA	NA	NA
Aroclor-1248	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	NA	NA	NA	NA
Aroclor-1254	ND	ND	ND	ND	22	22	0.95	0.95	NA	NA	0.19	0.19	0.01	0.008	0.008	0.007
Aroclor-1260	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	NA	NA	NA	NA
Aroclor-1262	1.9	0.51	1.9	0.27	1.9	0.42	1.7	1.7	NA	NA	0.92	0.92	NA	NA	NA	NA
Aroclor-1268	0.55	0.15	0.55	0.11	1.8	0.44	5	5	NA	NA	1.3	1.3	NA	NA	NA	NA
Aroclor, total	3.9	1.1	3.9	0.63	97	7.1	18	18	NA	NA	4	4	0.026	0.024	0.024	0.023
Alpha-chlordane	NA	NA	0.016	0.0031	0.13	0.13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	0.08	0.21	0.08	0.012	0.24	0.24	0.035	0.035	ND	ND	0.0061	0.0061	NA	NA	NA	NA
Heptachlor epoxide	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA
Inorganics [3]																
Antimony	ND	ND	ND	ND	18.9	7.3	6.8	6.8	27.4	16.1	8.3	8.3	NA	NA	NA	NA
Arsenic	7.9	4.8	7.9	4.5	13.1	13.1	9.5	9.5	5.7	3.6	11.2	11.2	NA	NA	NA	NA
Barium	75	44.4	164	61.7	2180	2180	717	717	NA	NA	1010	1010	NA	NA	NA	NA
Cadmium	ND	ND	0.65	0.33	2.5	2.5	12	12	NA	NA	1.8	1.8	1.2	0.73	1	0.767

TABLE 6-19 (continued)
EXPOSURE POINT CONCENTRATIONS
AREA B, WETLANDS ALONG LOCKWOOD AVE.
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Chemical of Potential Concern	Commercial Worker [1, 2]						Wetland/Marsh Receptor (Adult and Pre-Adolescent)				Adolescent Trespasser		Local Fisher			
	Surface Soil (0 to 2 Feet bgs) (mg/kg)		All Soil AREA #1 (0 to 15 Feet bgs) (mg/kg)		All Soil AREA #2 (0 to 15 Feet bgs) (mg/kg)		Surface Soil (0 to 2 Feet bgs)/ Sediment/Wetland Material (mg/kg)		Surface Water (ug/L)		Surface Soil (0 to 2 Feet bgs)/ Sediment/Wetland Material (mg/kg)		Oysters (mg/kg)		Mussels (mg/kg)	
	RME	CTE	RME	CTE	RME	CTE	RME	CTE	RME	CTE	RME	CTE	RME	CTE	RME	CTE
Chromium (total)	21.2	12.9	38.5	18.5	332	332	255	255	13.8	10.6	270	270	NA	NA	NA	NA
Manganese	373	254	373	235	295	295	422	422	289	111	239	239	NA	NA	NA	NA
Mercury	0.71	0.33	0.71	0.25	1.2	1.2	1.2	1.2	1.9	0.77	0.95	0.95	0.048	0.033	0.048	0.033
Nickel	16.7	14.8	24.2	14.8	58.1	58.1	89.1	89.1	NA	NA	44.9	44.9	NA	NA	NA	NA
Thallium	ND	ND	ND	ND	2.2	1.3	ND	ND	4.4	3.1	ND	ND	NA	NA	NA	NA
Vanadium	34.8	23.3	38.3	24.1	69.3	69.3	49.1	49.1	NA	NA	55.6	55.6	NA	NA	NA	NA
Zinc	NA	NA	264	138	400	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dioxins																
Toxicity Equivalence Concentration (TEQ)	0.0001	6.2E-05	0.0001	3.8E-05	0.00035	0.00012	0.00007	0.00007	NA	NA	0.00035	0.000079	NA	NA	NA	NA

Notes:
1) Exposure to currently exposed surface soil is assumed for the commercial worker under current land use.
2) Since development of the site for industrial use may occur, exposure to all soil (currently exposed and beneath pavement) to an estimated depth of 15 feet bgs is assumed for the commercial worker under future land use.
3) Exposure point concentrations for lead are presented in Appendix F-12

ND: Contaminant has been selected as a Chemical of Potential Concern (COPC) for this area/medium; however, this COPC was not detected (ND) in the respective sample subset for this receptor.
NA: Contaminant has not been selected as a COPC for this area/medium; an exposure point concentration is not applicable (NA).
CTE: Central Tendency Exposure - The arithmetic mean risk or median risk at this site.
RME: Reasonable Maximum Exposure - The highest exposure that is reasonably expected to occur at this site.

TABLE 6-20A
SUMMARY OF CANCER RISKS AND HAZARD INDICES
REASONABLE MAXIMUM EXPOSURE SCENARIO
AREA B, WETLANDS ALONG LOCKWOOD AVE.
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Receptor	Media	Exposure Route	Cancer Risk	Chemicals with Cancer Risk $>10^{-4}$	Chemicals with Cancer Risk $>10^{-5}$	Chemicals with Cancer Risk $>10^{-6}$	Hazard Index	Chemicals with HI > 1
Commercial Worker (Current/Future)	Exposed Surface Soils in Current Commercial Area 1	Incidental Ingestion	1.3E-05	--	--	Aroclor (total), Arsenic, TEQ-Dioxins/Furans	2.4E-01	--
		Dermal Contact	3.7E-06	--	--	Aroclor (total)	1.4E-01	--
		Total	1.7E-05	--	--	Aroclor (total), Arsenic, TEQ-Dioxins/Furans	3.7E-01	--
Commercial Worker (Future)	All Soils in Current Commercial Area 1, regardless of Depth and Pavement	Incidental Ingestion	1.5E-05	--	--	Benzo(a)pyrene, Aroclor (total), Arsenic, TEQ-Dioxins/Furans	2.5E-01	--
		Dermal Contact	4.6E-06	--	--	Aroclor (total)	1.4E-01	--
		Total	1.9E-05	--	--	Benzo(a)pyrene, Aroclor (total), Arsenic, TEQ-Dioxins/Furans	3.8E-01	--
Commercial Worker (Future)	All Soils in Future Commercial Area 2, regardless of Depth and Pavement	Incidental Ingestion	1.2E-04	--	Benzo(a)pyrene, Aroclor (total), TEQ-Dioxins/Furans	Benzo(a)anthracene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene, Dieldrin, Arsenic	5.0E+00	Aroclor (total)
		Dermal Contact	6.8E-05	--	Benzo(a)pyrene, Aroclor (total)	Benzo(a)anthracene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene, Arsenic, TEQ-Dioxins/Furans	3.4E+00	--
		Total	1.9E-04	Aroclor (total)	Benzo(a)pyrene, TEQ-Dioxins/Furans	Benzo(a)anthracene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene, Dieldrin, Arsenic	8.4E+00	Aroclor (total)

TABLE 6-20A (continued)
SUMMARY OF CANCER RISKS AND HAZARD INDICES
REASONABLE MAXIMUM EXPOSURE SCENARIO
AREA B, WETLANDS ALONG LOCKWOOD AVE.
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Receptor	Media	Exposure Route	Cancer Risk	Chemicals with Cancer Risk >10^{-4}	Chemicals with Cancer Risk >10^{-5}	Chemicals with Cancer Risk >10^{-6}	Hazard Index	Chemicals with HI > 1
Wetland/Marsh Receptor Adult (Current/Future)	Exposed Surface Soils, Sediments, & Wetland Soils Outside Wetlands along Lockwood Ave.	Incidental Ingestion	2.8E-06	--	--	--	8.4E-02	--
		Dermal Contact	5.2E-06	--	--	Benzo(a)pyrene, Aroclor (total)	1.7E-01	--
		Total	8.1E-06	--	--	Benzo(a)pyrene, Dibenzo(a,h)anthracene, Aroclor (total)	2.6E-01	--
	Surface Water in Ferry Creek and the Mouth of the Housatonic River	Dermal Contact	3.2E-07	--	--	--	4.9E-03	--
	Total All Routes		8.4E-06	--	--	Benzo(a)pyrene, Dibenzo(a,h)anthracene, Aroclor (total)	2.6E-01	--
Wetland/Marsh Receptor Pre-adolescent (Current/Future)	Exposed Surface Soils, Sediments, & Wetland Soils Outside Wetlands along Lockwood Ave.	Incidental Ingestion	1.6E-06	--	--	--	1.8E-01	--
		Dermal Contact	5.5E-06	--	--	Benzo(a)pyrene, Aroclor (total)	7.3E-01	--
		Total	7.1E-06	--	--	Benzo(a)pyrene, Dibenzo(a,h)anthracene, Aroclor (total)	9.1E-01	--
	Surface Water in Ferry Creek and the Mouth of the Housatonic River	Dermal Contact	1.0E-07	--	--	--	4.8E-03	--
	Total All Routes		7.2E-06	--	--	Benzo(a)pyrene, Dibenzo(a,h)anthracene, Aroclor (total)	9.1E-01	--
Adolescent Trespasser (Current/Future)	Exposed Surface Soils, Sediments, & Wetland Soils in Wetlands along Lockwood Ave.	Incidental Ingestion	5.0E-06	--	--	Benzo(a)pyrene, TEQ-Dioxins/Furans	1.1E-01	--
		Dermal Contact	9.2E-07	--	--	--	2.0E-02	--
		Total	5.9E-06	--	--	Benzo(a)pyrene, TEQ-Dioxins/Furans	1.3E-01	--
Local Fisher (Current/Future)	Mussels	Ingestion	6.9E-06	--	--	Benzo(b)fluoranthene, Aroclor (total)	5.7E-01	--
	Oysters	Ingestion	6.2E-06	--	--	Aroclor (total)	6.5E-01	--

TABLE 6-20B
SUMMARY OF CANCER RISKS AND HAZARD INDICES
CENTRAL TENDENCY EXPOSURE SCENARIO
AREA B, WETLANDS ALONG LOCKWOOD AVE.
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Receptor	Media	Exposure Route	Cancer Risk	Chemicals with Cancer Risk $>10^{-4}$	Chemicals with Cancer Risk $>10^{-5}$	Chemicals with Cancer Risk $>10^{-6}$	Hazard Index	Chemicals with HI > 1
Commercial Worker (Current/Future)	Exposed Surface Soils in Current Commercial Area 1	Incidental Ingestion	1.2E-06	--	--	--	4.1E-02	--
		Dermal Contact	5.5E-08	--	--	--	4.0E-03	--
		Total	1.3E-06	--	--	--	4.5E-02	--
Commercial Worker (Future)	All Soils in Current Commercial Area 1, regardless of Depth and Pavement	Incidental Ingestion	9.9E-07	--	--	--	3.0E-02	--
		Dermal Contact	5.0E-08	--	--	--	2.4E-03	--
		Total	1.0E-06	--	--	--	3.2E-02	--
Commercial Worker (Future)	All Soils in Future Commercial Area 2, regardless of Depth and Pavement	Incidental Ingestion	6.9E-06	--	--	Benzo(a)pyrene, Arsenic, TEQ-Dioxins/Furans	3.0E-01	--
		Dermal Contact	6.3E-07	--	--	--	2.5E-02	--
		Total	7.5E-06	--	--	Benzo(a)pyrene, Arsenic, TEQ-Dioxins/Furans	3.2E-01	--
Wetland/Marsh Receptor Adult (Current/Future)	Exposed Surface Soils, Sediments, & Wetland Soils Outside Wetlands along Lockwood Ave.	Incidental Ingestion	3.3E-07	--	--	--	4.2E-02	--
		Dermal Contact	1.5E-07	--	--	--	2.3E-02	--
		Total	4.8E-07	--	--	--	6.5E-02	--
	Surface Water in Ferry Creek and the Mouth of the Housatonic River	Dermal Contact	7.1E-08	--	--	--	2.8E-03	--
	Total All Routes		5.5E-07	--	--	--	6.8E-02	--

TABLE 6-20B (continued)
SUMMARY OF CANCER RISKS AND HAZARD INDICES
CENTRAL TENDENCY EXPOSURE SCENARIO
AREA B, WETLANDS ALONG LOCKWOOD AVE.
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Receptor	Media	Exposure Route	Cancer Risk	Chemicals with Cancer Risk $>10^{-4}$	Chemicals with Cancer Risk $>10^{-5}$	Chemicals with Cancer Risk $>10^{-6}$	Hazard Index	Chemicals with HI > 1
Wetland/Marsh Receptor Pre-adolescent (Current/Future)	Exposed Surface Soils, Sediments, & Wetland Soils Outside Wetlands along Lockwood Ave.	Incidental Ingestion	2.1E-07	--	--	--	8.8E-02	--
		Dermal Contact	2.8E-07	--	--	--	1.5E-01	--
		Total	4.9E-07	--	--	--	2.3E-01	--
	Surface Water in Ferry Creek and the Mouth of the Housatonic River	Dermal Contact	2.5E-08	--	--	--	2.7E-03	--
	Total All Routes		5.2E-07	--	--	--	2.3E-01	--
Adolescent Trespasser (Current/Future)	Exposed Surface Soils, Sediments, & Wetland Soils in Wetlands along Lockwood Ave.	Incidental Ingestion	7.4E-07	--	--	--	4.2E-02	--
		Dermal Contact	4.7E-08	--	--	--	2.9E-03	--
		Total	7.9E-07	--	--	--	4.5E-02	--
Local Fisher (Current/Future)	Mussels	Ingestion	1.0E-06	--	--	--	4.7E-01	--
	Oysters	Ingestion	8.9E-07	--	--	--	4.8E-01	--

TABLE 6-21
SUMMARY OF REMEDIAL INVESTIGATIONS AND RECOMMENDATIONS
AREA B, WETLANDS ALONG LOCKWOOD AVE.
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Area of Concern	Chemicals of Potential Concern	Receptor	Reasonable Maximum Exposure (RME) Risk Estimates						Lead Results [1]	Asbestos Results [2]
			ILCR	Risk Drivers			HI	Risk Drivers		
Area B Lower Ferry Creek (Wetlands along Lockwood Ave.)	**Surface Soil/Sediment (0 to 2 feet)** benzo(a)anthracene, antimony, nickel benzo(a)pyrene, arsenic, vanadium benzo(b)fluoranthene, barium, Aroclor-1242 dibenzo(a,h)anthracene, cadmium, Aroclor-1254 indeno(1,2,3-cd)pyrene, chromium, Aroclor-1262 bis(2-ethylhexyl)phthalate, copper, Aroclor-1268 dieldrin, lead dioxins/furans, manganese asbestos, mercury	Wetland/Marsh Receptor (adult) (current/future)	8.1E-06	$>10^{-4}$ None	$>10^{-5}$ None	$>10^{-6}$ benzo(a)pyrene dibenzo(a,h)anthracene Aroclor (total)	0.26	>1.0 None		Asbestos was detected at an averag concentration of 3%. This slightly exceeds the 1% concentration which defines an asbestos-containing material. Detections ranged from 0.99 - 50%.
		Wetland/Marsh Receptor (pre-adolescent) (current/future)	7.1E-06	$>10^{-4}$ None	$>10^{-5}$ None	$>10^{-6}$ benzo(a)pyrene dibenzo(a,h)anthracene Aroclor (total)	0.910	>1.0 None		
		Trespasser (adolescent) (current/future)	5.9E-06	$>10^{-4}$ None	$>10^{-5}$ None	$>10^{-6}$ benzo(a)pyrene dioxins/furans	0.13	>1.0 None	Slope Factor Approach - 0.97% probability that fetal blood lead level will exceed the established level of concern (10 ug/dl).	
		Commercial Worker (current/future)	1.7E-05	$>10^{-4}$ None	$>10^{-5}$ None	$>10^{-6}$ Aroclor (total) arsenic dioxins/furans	0.37	>1.0 None	Slope Factor Approach - 3.71% probability that fetal blood lead level will exceed the established level of concern (10 ug/dl).	
	All Soil/Sediment (0 to15 feet) benzo(a)anthracene, antimony, thallium benzo(a)pyrene, arsenic, vanadium benzo(b)fluoranthene, barium, zinc dibenzo(a,h)anthracene, cadmium, Aroclor-1254 indeno(1,2,3-cd)pyrene, chromium, total, Aroclor-1262 alpha-chlordane, copper, Aroclor-1268 bis(2-ethylhexyl)phthalate, lead dieldrin, manganese asbestos, mercury dioxins/furans, nickel	Commercial Worker (future) Area 1	1.9E-05	$>10^{-4}$ None	$>10^{-5}$ None	$>10^{-6}$ benzo(a)pyrene Aroclor (total) arsenic dioxins/furans	0.38	>1.0 None	Slope Factor Approach - 2.23% probability that fetal blood lead level will exceed the established level of concern (10 ug/dl).	Asbestos was detected at an averag concentration of 2%. This slightly exceeds the 1% concentration which defines an asbestos-containing material. Detections ranged from 0.99 - 50%.
		Commercial Worker (future) Area 2	1.9E-04	$>10^{-4}$ Aroclor (total)	$>10^{-5}$ benzo(a)pyrene dioxins/furans	$>10^{-6}$ benzo(a)anthracene benzo(b)fluoranthene dibenzo(a,h)anthracene arsenic dieldrin	8.4	>1.0 Aroclor (total)	Slope Factor Approach - 2.28% probability that fetal blood lead level will exceed the established level of concern (10 ug/dl).	
	Surface Water 1,1,1-trichloroethane, vinyl chloride, chromium 1,1-dichloroethene, bis(2-ethylhexyl)phthalate, manganese 1,2-dichloroethene, total, heptachlor epoxide, mercury trichloroethene, antimony, thallium arsenic	Wetland/Marsh Receptor (adult) (current/future)	3.2E-07	$>10^{-4}$ None	$>10^{-5}$ None	$>10^{-6}$ None	0.0049	>1.0 None		
		Wetland/Marsh Receptor (pre-adolescent) (currrent/future)	1.0E-07	$>10^{-4}$ None	$>10^{-5}$ None	$>10^{-6}$ None	0.0048	>1.0 None		

TABLE 6-21 (continued)
SUMMARY OF REMEDIAL INVESTIGATIONS AND RECOMMENDATIONS
AREA B, WETLANDS ALONG LOCKWOOD AVE.
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Area of Concern	Chemicals of Potential Concern			Receptor	Reasonable Maximum Exposure (RME) Risk Estimates						Lead Results [1]	Asbestos Results [2]
					ILCR	Risk Drivers			HI	Risk Drivers		
	Biota (Oysters)			Local Fisher (adult)	6.2E-06	$>10^{-4}$	$>10^{-5}$	$>10^{-6}$	0.65	>1.0		
	benzo(b)fluoranthene	cadmium	mercury			None	None	Aroclor (total)		None		
	Aroclor-1254											
	Biota (Mussels)			Local Fisher (adult)	6.9E-06	$>10^{-4}$	$>10^{-5}$	$>10^{-6}$	0.57	>1.0		
	benzo(a)anthracene	Aroclor-1254	mercury			None	None	benzo(b)fluoranthene		None		
	benzo(b)fluoranthene	cadmium						Aroclor (total)				

Notes:
1) The risk from lead for an adult was evaluated following "Recommendations of the Technical Review Workgroup for Lead for the Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil", USEPA, December 1996. The stated goal is that an individual should have no more than 5% probability of exceeding the level of concern.
2) The National Emission Standards for Hazardous Air Pollutants - EPA regulation 40 CFR Subpart M, Part 61 (NESHAP) defines asbestos as material containing 0.01 fibers per cubic centimeter and sets this valve as an abatement clearance level.

TABLE 6-22
SELECTION OF CHEMICALS OF POTENTIAL CONCERN
AREA C, HOUSATONIC BOAT CLUB WETLANDS AREA
SURFACE SOIL/SEDIMENT
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	COPC Screening Level (1)	N/C (2)	SSL Inhalation (3)	State Residential Direct Exposure (4)	State Industrial Direct Exposure (4)	Background Concentration (5)	Select As COPC? (6)
Volatile Organic Compounds (ug/kg)												
1,2-DICHLOROETHENE (TOTAL)	1/21	11 - 11	12 - 32	10	HB01	70000	N	1200000	500000	1000000	-	N
2-BUTANONE	2/21	20 - 20	12 - 37	10	HB10, HB11	4700000	N	-	500000	1000000	-	N
ACETONE	6/29	27 - 230	12 - 190	49	HB18	780000	N	100000000	500000	1000000	-	N
CARBON DISULFIDE	15/27	2 - 60	12 - 32	12	HB8A	780000	N	720000	500000	1000000	-	N
TOLUENE	3/22	1 - 32	12 - 32	10	HB07	1600000	N	650000	500000	1000000	-	N
Semivolatile Organic Compounds (ug/kg)												
1,2,4-TRICHLOROBENZENE	1/24	80 - 80	190 - 2300	420	HB22	78000	N	3200000	680000	2500000	-	N
1,4-DICHLOROBENZENE	1/24	79 - 79	190 - 2300	420	HB22	27000	C	-	26000	240000	-	N
2-METHYLNAPHTHALENE	4/24	36 - 955	190 - 2300	380	HB01	160000	N	-	1000000	2500000	-	N
4-CHLORO-3-METHYLPHENOL	1/24	55 - 55	190 - 2300	420	HB22	-	-	-	-	-	-	N
4-METHYLPHENOL	2/24	325 - 935	190 - 2300	420	HB01	39000	N	-	340000	2500000	-	N
ACENAPHTHENE	6/24	33 - 920	190 - 2300	370	HB01	470000	N	-	1000000	2500000	-	N
ACENAPHTHYLENE	16/29	110 - 1500	190 - 1300	410	HB07	-	-	-	1000000	2500000	-	N
ANTHRACENE	20/25	42 - 1500	590 - 1100	360	HB01	2300000	N	-	1000000	2500000	-	N
BENZO(A)ANTHRACENE	31/31	68 - 4100	0 - 0	1000	HB13	880	C	-	1000	7800	-	Y
BENZO(A)PYRENE	29/31	63 - 3900	650 - 1100	970	HB07	88	C	-	1000	1000	-	Y
BENZO(B)FLUORANTHENE	32/32	160 - 6900	0 - 0	1500	HB07	880	C	-	1000	7800	-	Y
BENZO(G,H,I)PERYLENE	22/28	95 - 2500	210 - 1100	840	HB13	-	-	-	1000000	2500000	-	N
BENZO(K)FLUORANTHENE	24/28	150 - 2200	430 - 1100	700	HB14	8800	C	-	8400	78000	-	N
BIS(2-ETHYLHEXYL)PHTHALATE	20/29	140 - 6300	190 - 1500	790	HB03	46000	C	31000000	44000	410000	-	N
BUTYLBENZYL PHTHALATE	2/24	200 - 280	190 - 2300	410	HB11	1600000	N	930000	1000000	2500000	-	N
CARBAZOLE	9/25	40 - 1000	190 - 2300	340	HB01	32000	C	-	31000	290000	-	N
CHRYSENE	31/31	110 - 4900	0 - 0	1400	HB03	88000	C	-	84000	780000	-	N
DI-N-BUTYL PHTHALATE	14/29	24 - 12000	160 - 2090	1300	HB13	780000	N	2300000	1000000	2500000	-	N
DI-N-OCTYL PHTHALATE	4/25	37 - 900	190 - 2300	410	HB01	160000	N	10000000	1000000	2500000	-	N
DIBENZO(A,H)ANTHRACENE	21/29	24 - 1300	210 - 1025	320	HB01	88	C	-	84	780	-	Y
DIBENZOFURAN	3/24	43 - 836	190 - 2300	390	HB01	31000	N	-	270000	2500000	-	N
DIETHYL PHTHALATE	1/24	1200 - 1200	190 - 2300	430	HB01	6300000	N	2000000	1000000	2500000	-	N
DIMETHYL PHTHALATE	1/24	900 - 900	190 - 2300	420	HB01	78000000	N	-	1000000	2500000	-	N
FLUORANTHENE	26/31	180 - 5300	540 - 1300	1300	HB07	310000	N	-	1000000	2500000	-	N
FLUORENE	13/25	40 - 930	190 - 1100	260	HB01	310000	N	-	1000000	2500000	-	N
INDENO(1,2,3-CD)PYRENE	28/31	29 - 2400	210 - 650	700	HB13	880	C	-	840	7800	-	Y
N-NITROSODIPHENYLAMINE	9/25	34 - 1450	190 - 2300	390	HB01	130000	C	-	130000	1200000	-	N
NAPHTHALENE	4/24	45 - 965	190 - 2300	390	HB01	160000	N	-	1000000	2500000	-	N
PENTACHLOROPHENOL	1/24	73 - 73	470 - 5500	1000	HB22	5300	C	-	5100	48000	-	N
PHENANTHRENE	30/30	58 - 4100	0 - 0	810	HB13	-	-	-	1000000	2500000	-	N
PHENOL	2/24	540 - 1100	190 - 2300	460	HB3A	4700000	N	-	1000000	2500000	-	N
PYRENE	32/32	95 - 10000	0 - 0	2200	HB07	230000	N	-	1000000	2500000	-	N

TABLE 6-22 (continued)
SELECTION OF CHEMICALS OF POTENTIAL CONCERN
AREA C, HOUSATONIC BOAT CLUB WETLANDS AREA
SURFACE SOIL/SEDIMENT
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	COPC Screening Level (1)	N/C (2)	SSL Inhalation (3)	State Residential Direct Exposure (4)	State Industrial Direct Exposure (4)	Background Concentration (5)	Select As COPC? (6)
Pesticides/PCBs (ug/kg)												
4,4'-DDD	18/35	0.34 - 20	3.3 - 45	6	HB15	2700	C	-	2600	24000	-	N
4,4'-DDE	25/35	0.7 - 29	1.6 - 45	4	HB19	1900	C	-	1800	17000	-	N
4,4'-DDT	17/35	0.12 - 21	1.6 - 45	6	HB07, HB13	1900	C	-	1800	17000	-	N
ALDRIN	20/35	0.05 - 1.7	1.3 - 23	1	HB13	38	C	3000	36	340	-	N
ALPHA-BHC	17/35	0.092 - 1.1	1.2 - 23	2	HB3A	100	C	800	97	910	-	N
ALPHA-CHLORDANE	20/34	0.41 - 9.5	0.85 - 23	3	HB13	1800	C	20000	490	2200	-	N
AROCLOR-1260	1/35	73 - 73	16 - 450	43	HB20	320	C	-	1000	10000	-	N
AROCLOR-1262	17/35	25.2 - 6100	16 - 450	550	HB03	320	C	-	1000	10000	-	Y
AROCLOR-1268	21/35	25 - 8900	16 - 450	840	HB04	320	C	-	1000	10000	-	Y
BETA-BHC	3/35	0.24 - 2	0.85 - 23	2	HB01	350	C	-	340	3200	-	N
DELTA-BHC	5/35	0.25 - 3.9	0.85 - 23	2	HB11	-	-	-	97	910	-	N
DIELDRIN	24/34	0.11 - 14	1.8 - 45	4	HB07	40	C	1000	38	360	-	N
ENDOSULFAN I	2/35	0.083 - 3.6	1.2 - 23	2	C-SD03	47000	N	-	410000	1200000	-	N
ENDOSULFAN II	10/35	0.36 - 25	2.2 - 45	6	HB13	47000	N	-	410000	1200000	-	N
ENDOSULFAN SULFATE	8/34	0.51 - 45	2.2 - 45	6	HB3A	-	-	-	410000	1200000	-	N
ENDRIN	11/35	0.38 - 15	2.5 - 45	5	HB03	2300	N	-	20000	610000	-	N
ENDRIN ALDEHYDE	13/35	0.79 - 190	1.6 - 45	20	HB04	-	-	-	20000	610000	-	N
ENDRIN KETONE	4/35	0.15 - 2.6	1.6 - 45	4	HBC 002	-	-	-	20000	610000	-	N
GAMMA-BHC (LINDANE)	12/35	0.19 - 2.3	0.85 - 23	2	C-SD03, HB02	490	C	-	20000	610000	-	N
GAMMA-CHLORDANE	25/35	0.12 - 9.7	0.85 - 23	3	C-SS02	1800	C	20000	490	2200	-	N
HEPTACHLOR	6/35	0.21 - 0.85	0.85 - 23	2	HB15	140	C	100	140	1300	-	N
HEPTACHLOR EPOXIDE	12/35	0.03 - 6.8	1.2 - 23	2	HB07	70	C	5000	67	630	-	N
METHOXYCHLOR	6/35	12.9 - 240	8.5 - 230	31	HB07	39000	N	-	340000	10000000	-	N
Metals (mg/kg)												
ALUMINUM	34/34	2430 - 20700	0 - 0	12100	C-SD04	7800	N	-	-	-	22600	N(7)
ANTIMONY	3/26	0.52 - 12.1	1.2 - 22.3	3	C-SD01	3.1	N	-	27	8200	ND	Y
ARSENIC	25/33	1.8 - 18.2	1.5 - 20.1	8	HB03	0.43	C	750	10	10	11.6	Y
BARIUM	33/34	13.2 - 7020	9.3 - 9.3	630	HB04	550	N	690000	4700	140000	329	Y
BERYLLIUM	16/30	0.17 - 2	0.21 - 1.2	0.5	HR20	16	C	1300	2	2	1.3	N
CADMIUM	8/27	0.43 - 5.2	0.3 - 1.7	1	HB02	7.8	N	1800	34	1000	1.4	N
CALCIUM	29/34	294 - 5940	2250 - 3950	2970	HB08	-	-	-	-	-	7420	N
CHROMIUM	34/34	7.5 - 823	0 - 0	218	HB02	23	N	270	100	100	35.2	Y
COBALT	34/34	1.7 - 16.6	0 - 0	10	C-SD01, HB01	470	N	-	1000	2500	12.4	N
COPPER	35/35	20.6 - 12700	0 - 0	1600	HB3A	310	N	-	2500	76000	123	Y
IRON	34/34	7240 - 40000	0 - 0	23600	HB02	2300	N	-	-	-	24100	N(7)
LEAD	78/116	27.2 - 7860	100 - 100	387	HB3A	400(8)	N	-	500	1000	344	Y
MAGNESIUM	34/34	1400 - 35500	0 - 0	9300	HB04	-	-	-	-	-	5690	N
MANGANESE	34/34	79.4 - 586	0 - 0	290	HR20	160	N	-	1600	47000	660	N

TABLE 6-22 (continued)
SELECTION OF CHEMICALS OF POTENTIAL CONCERN
AREA C, HOUSATONIC BOAT CLUB WETLANDS AREA
SURFACE SOIL/SEDIMENT
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	COPC Screening Level (1)	N/C (2)	SSL Inhalation (3)	State Residential Direct Exposure (4)	State Industrial Direct Exposure (4)	Background Concentration (5)	Select As COPC? (6)
MERCURY	19/32	0.25 - 1.4	0.08 - 1	1	HB01	2.3	N	10	20	610	0.28	N
NICKEL	34/34	6 - 164	0 - 0	42	HB3A	160	N	13000	1400	7500	40.4	Y
POTASSIUM	29/34	559 - 8600	478 - 5260	3290	HB08	-	-	-	-	-	2680	N
SELENIUM	3/29	1.5 - 3.9	0.34 - 4.3	1	HB04	39	N	-	340	10000	3.3	N
SILVER	6/26	0.61 - 24.2	0.32 - 3.3	2	HB22	39	N	-	340	10000	3.3	N
SODIUM	31/34	173 - 45400	1770 - 2690	12100	HB08	-	-	-	-	-	248	N
THALLIUM	2/28	3.4 - 4.4	0.42 - 8.2	2	HB02	0.55	N	-	5.4	160	ND	Y
VANADIUM	33/34	10.7 - 74.1	60.8 - 60.8	40	HB04	55	N	-	470	14000	81.9	N
ZINC	34/34	16.9 - 1440	0 - 0	328	HB3A	2300	N	-	20000	610000	604	N
Dioxin (ug/kg)												
TOXICITY EQUIVALENCY FACTOR	28/28	0.000514326 - 1.829908	0 - 0	0.11	HB07	0.0043	C	-	-	-	-	Y
Asbestos (%)												
ASBESTOS	13/90	0.99 - 60	0.1 - 0.1	1	BC-SB8	1	C	-	-	-	-	Y
Total Organic Carbon (mg/kg)												
TOTAL ORGANIC CARBON	4/4	36400 - 61100	-	50275	OU3-C-SD03-0002	-	-	-	-	-	-	N

Notes:
1) Based on current USEPA Region III guidance (USEPA Region III, 10-1-99). Residential Soil Ingestion is used for soil and sediment. Value for noncarcinogens is based on a target hazard quotient of O.I. Value for carcinogens is based on a cancer risk of IE-6.
2) COPC screening level based on noncarcinogenic (N)/carcinogenic (C) effects.
3) USEPA Soil Screening Levels (USEPA, May 1996).
4) CTDEP, January 1996. In some cases, calculated or surrogate or ceiling value presented as detailed in Table 6-1.
5) Maximum background concentrations presented for inorganics only because background concentrations for organics were not used in COPC selection.
6) COPC selection criteria discussed in Section 6.2 and presented/defined in Table 6-1. Chemical was selected as a COPC (Y = yes) if maximum detected concentration exceeded screening levels, except that noncarcinogenic inorganics detected at concentrations exceeding screening levels (based on Region III criteria) but less than Region III risk-based concentrations AND maximum background concentration were not selected as COPCs.
7) USEPA Region I does not advocate quantitative risk assessment of aluminum or iron.
8) Value is based on OSWER soil screening level for residential land use (USEPA, 1994).
9) Maximum concentration exceeds COPC screening level, but below Region III RBC AND maximum background concentrations.

ND Compound was not present at detectable concentrations in background samples.
- Not available or not applicable.

TABLE 6-23
SELECTION OF CHEMICALS OF POTENTIAL CONCERN
AREA C, HOUSATONIC BOAT CLUB WETLANDS AREA
ALL SOIL/SEDIMENT (0-15')
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	COPC Screening Level (1)	N/C (2)	SSL Inhalation (3)	State Residential Direct Exposure (4)	State Industrial Direct Exposure (4)	Background Concentration (5)	Select As COPC? (6)
Volatile Organic Compounds (ug/kg)												
1,2-DICHLOROETHENE (TOTAL)	1/26	11 - 11	11 - 38	10	HB01	70000	N	1200000	500000	1000000	-	N
2-BUTANONE	3/26	20 - 42	11 - 37	11	BC-SB8	4700000	N	-	500000	1000000	-	N
2-HEXANONE	1/26	11 - 11	11 - 32	9	BC-SB8	310000	N	-	500000	1000000	-	N
4-METHYL-2-PENTANONE	1/26	30 - 30	11 - 32	10	BC-SB8	630000	N	-	500000	1000000	-	N
ACETONE	6/34	27 - 230	11 - 200	45	HB18	780000	N	100000000	500000	1000000	-	N
CARBON DISULFIDE	16/32	2 - 60	12 - 38	11	HB8A	780000	N	720000	500000	1000000	-	N
CHLOROBENZENE	1/26	7 - 7	11 - 32	9	BC-SB8	160000	N	130000	500000	1000000	-	N
ETHYLBENZENE	1/26	34 - 34	11 - 32	10	BC-SB8	780000	N	400000	500000	1000000	-	N
TOLUENE	5/27	1 - 750	11 - 32	37	BC-SB8	1600000	N	650000	500000	1000000	-	N
XYLENES, TOTAL	1/26	310 - 310	11 - 32	21	BC-SB8	16000000	N	410000	500000	1000000	-	N
Semivolatile Organic Compounds (ug/kg)												
1,2,4-TRICHLOROBENZENE	1/32	80 - 80	170 - 3200	410	HB22	78000	N	3200000	680000	2500000	-	N
1,4-DICHLOROBENZENE	1/32	79 - 79	170 - 3200	410	HB22	27000	C	-	26000	240000	-	N
2,4-DIMETHYLPHENOL	1/32	19000 - 19000	170 - 2300	960	BC-SB8	160000	N	-	1000000	2500000	-	N
2-METHYLNAPHTHALENE	6/32	36 - 955	170 - 2300	340	HB01	310000	N	-	1000000	2500000	-	N
2-METHYLPHENOL	1/32	880 - 880	170 - 2300	390	BC-SB8	390000	N	-	1000000	2500000	-	
4-CHLORO-3-METHYLPHENOL	1/32	55 - 55	170 - 3200	410	HB22	-	None	-	-	-	-	N
4-METHYLPHENOL	4/32	81 - 1700	170 - 2300	400	BC-SB8	39000	N	-	340000	2500000	-	N
ACENAPHTHENE	7/32	33 - 920	170 - 3200	360	HB01	470000	N	-	1000000	2500000	-	N
ACENAPHTHYLENE	17/37	110 - 1500	170 - 3200	390	HB07	-	None	-	1000000	2500000	-	N
ANTHRACENE	22/30	42 - 1500	400 - 1100	350	HB01	2300000	N	-	1000000	2500000	-	N
BENZO(A)ANTHRACENE	34/39	52 - 4100	170 - 410	900	HB13	880	C	-	1000	7800	-	Y
BENZO(A)PYRENE	31/39	54 - 3900	170 - 3200	870	HB07	88	C	-	1000	1000	-	Y
BENZO(B)FLUORANTHENE	34/40	43 - 6900	170 - 3200	1300	HB07	880	C	-	1000	7800	-	Y
BENZO(G,H,I)PERYLENE	23/36	95 - 2500	170 - 3200	740	HB13	-	None	-	1000000	2500000	-	N
BENZO(K)FLUORANTHENE	26/36	64 - 2200	170 - 3200	670	C-SD01, HB14	8800	C	-	8400	78000	-	N
BIS(2-ETHYLHEXYL)PHTHALATE	20/37	140 - 6300	170 - 3200	730	HB03	46000	C	31000000	44000	410000	-	N
BUTYLBENZYL PHTHALATE	2/32	200 - 280	170 - 3200	400	HB11	1600000	N	930000	1000000	2500000	-	N
CARBAZOLE	11/33	40 - 1000	170 - 2300	300	HB01	32000	C	-	31000	290000	-	N
CHRYSENE	34/39	54 - 16000	170 - 410	1600	BC-SB8	88000	C	-	84000	780000	-	N
DI-N-BUTYL PHTHALATE	16/37	24 - 12000	160 - 2090	1000	HB13	780000	N	2300000	1000000	2500000	-	N
DI-N-OCTYL PHTHALATE	4/33	37 - 900	170 - 3200	400	HB01	160000	N	10000000	1000000	2500000	-	N
DIBENZO(A,H)ANTHRACENE	22/37	24 - 1300	170 - 3200	330	HB01	88	C	-	84	780	-	Y
DIBENZOFURAN	3/32	43 - 836	170 - 3200	380	HB01	31000	N	-	270000	2500000	-	N
DIETHYL PHTHALATE	1/32	1200 - 1200	170 - 3200	420	HB01	6300000	N	2000000	1000000	2500000	-	N
DIMETHYL PHTHALATE	1/32	900 - 900	170 - 3200	410	HB01	78000000	N	-	1000000	2500000	-	N
FLUORANTHENE	29/39	91 - 5300	170 - 1300	1200	HB07	310000	N	-	1000000	2500000	-	N
FLUORENE	15/33	40 - 1300	170 - 1100	270	BC-SB8	310000	N	-	1000000	2500000	-	N
INDENO(1,2,3-CD)PYRENE	29/39	29 - 2400	170 - 3200	630	HB13	880	C	-	840	7800	-	Y
N-NITROSODIPHENYLAMINE	11/33	34 - 3000	170 - 2300	440	BC-SB8	130000	C	-	130000	1200000	-	N
NAPHTHALENE	6/32	45 - 2300	170 - 2300	400	BC-SB8	310000	N	-	1000000	2500000	-	N
PENTACHLOROPHENOL	1/32	73 - 73	430 - 7700	1000	HB22	5300	C	-	5100	48000	-	N

TABLE 6-23 (continued)
SELECTION OF CHEMICALS OF POTENTIAL CONCERN
AREA C, HOUSATONIC BOAT CLUB WETLANDS AREA
ALL SOIL/SEDIMENT (0-15')
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	COPC Screening Level (1)	N/C (2)	SSL Inhalation (3)	State Residential Direct Exposure (4)	State Industrial Direct Exposure (4)	Background Concentration (5)	Select As COPC? (6)
PHENANTHRENE	32/38	58 - 4200	170 - 410	810	BC-SB8	-	None	-	1000000	2500000	-	N
PHENOL	4/32	59 - 1900	170 - 2300	440	BC-SB8	4700000	N	-	1000000	2500000	-	N
PYRENE	34/40	95 - 10000	170 - 3200	1900	HB07	230000	N	-	1000000	2500000	-	N
Pesticides/PCBs (ug/kg)												
4,4'-DDD	19/43	0.34 - 20	1.9 - 290	9	HB15	2700	C	-	2600	24000	-	N
4,4'-DDE	26/43	0.7 - 42	1.6 - 290	8	C-SD03	1900	C	-	1800	17000	-	N
4,4'-DDT	18/43	0.12 - 21	1.6 - 290	9	HB07, HB13	1900	C	-	1800	17000	-	N
ALDRIN	21/43	0.05 - 1.7	0.98 - 150	3	HB13	38	C	3000	36	340	-	N
ALPHA-BHC	17/43	0.092 - 1.1	0.98 - 150	3	HB3A	100	C	800	97	910	-	N
ALPHA-CHLORDANE	21/42	0.41 - 58	0.85 - 150	6	C-SD03	1800	C	20000	490	2200	-	N
AROCLOR-1242	1/43	7400 - 7400	16 - 2900	240	C-SD03	320	C	-	1000	10000	-	Y
AROCLOR-1248	1/43	330 - 330	16 - 2900	81	C-SD01	320	C	-	1000	10000	-	Y
AROCLOR-1254	2/43	72 - 1600	16 - 450	79	BC-SB8	160	N	-	1000	10000	-	Y
AROCLOR-1260	1/43	73 - 73	16 - 2900	75	HB20	320	C	-	1000	10000	-	N
AROCLOR-1262	22/43	11 - 230000	16 - 450	5800	BC-SB8	320	C	-	1000	10000	-	Y
AROCLOR-1268	25/43	8.2 - 300000	16 - 450	7700	BC-SB8	320	C	-	1000	10000	-	Y
BETA-BHC	3/43	0.24 - 2	0.85 - 150	4	HB01	350	C	-	340	3200	-	N
DELTA-BHC	6/43	0.25 - 4.2	0.85 - 150	4	C-SD01	-	None	-	97	910	-	N
DIELDRIN	26/42	0.11 - 14	1.8 - 290	7	HB07	40	C	1000	38	360	-	N
ENDOSULFAN I	3/43	0.063 - 3.6	1.2 - 150	4	C-SD03	47000	N	-	410000	1200000	-	N
ENDOSULFAN II	11/43	0.36 - 25	2.2 - 290	9	HB13	47000	N	-	410000	1200000	-	N
ENDOSULFAN SULFATE	8/42	0.51 - 45	1.9 - 290	9	HB3A	-	None	-	410000	1200000	-	N
ENDRIN	14/43	0.06 - 15	2.5 - 290	8	HB03	2300	N	-	20000	610000	-	N
ENDRIN ALDEHYDE	14/43	0.79 - 190	1.6 - 290	20	HB04	-	None	-	20000	610000	-	N
ENDRIN KETONE	5/43	0.15 - 9.2	1.6 - 290	7	C-SD01	-	None	-	20000	610000	-	N
GAMMA-BHC (LINDANE)	13/43	0.19 - 2.3	0.85 - 150	4	C-SD03, HB02	490	C	-	20000	610000	-	N
GAMMA-CHLORDANE	27/43	0.12 - 32	0.85 - 23	3	BC-SB8	1800	C	20000	490	2200	-	N
HEPTACHLOR	6/43	0.21 - 0.85	0.85 - 150	4	HB15	140	C	100	140	1300	-	N
HEPTACHLOR EPOXIDE	15/43	0.03 - 11	1.2 - 150	4	C-SD03	70	C	5000	67	630	-	N
METHOXYCHLOR	7/43	12.9 - 1200	8.5 - 1500	73	C-SD03	39000	N	-	340000	10000000	-	N
Metals (mg/kg)												
ALUMINUM	42/42	2380 - 21600	0 - 0	11400	C-SD01	7800	N	-	-	-	22600	N[7]
ANTIMONY	4/34	0.52 - 13.9	1.2 - 22.3	3	C-SD01	3.1	N	-	27	8200	ND	N
ARSENIC	33/41	0.79 - 18.2	1.5 - 20.1	7	HB03	0.43	C	750	10	10	11.6	Y
BARIUM	41/42	11.6 - 13900	9.3 - 9.3	849	BC-SB8	550	N	690000	4700	140000	329	Y
BERYLLIUM	19/38	0.17 - 2	0.09 - 1.2	0.4	HR20	0.15	C	1300	2	2	1.3	Y
CADMIUM	10/35	0.43 - 5.3	0.23 - 1.7	1	C-SD01	3.9	N	1800	34	1000	1.4	N
CALCIUM	37/42	294 - 5940	2250 - 3950	2850	C-SD01, HB08	-	-	-	-	-	7420	N
CHROMIUM	42/42	3.6 - 950	0 - 0	205	C-SD01	39	N	270	100	100	35.2	Y
COBALT	41/42	1.7 - 38.3	1.6 - 1.6	10	BC-SB8	470	N	-	1000	2500	12.4	N
COPPER	48/49	14.5 - 25100	300 - 300	2000	BC-SB8	310	N	-	2500	76000	123	Y

TABLE 6-23 (continued)
SELECTION OF CHEMICALS OF POTENTIAL CONCERN
AREA C, HOUSATONIC BOAT CLUB WETLANDS AREA
ALL SOIL/SEDIMENT (0-15')
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	COPC Screening Level (1)	N/C (2)	SSL Inhalation (3)	State Residential Direct Exposure (4)	State Industrial Direct Exposure (4)	Background Concentration (5)	Select As COPC? (6)
IRON	42/42	4610 - 43000	0 - 0	22500	C-SD01	2300	N	-	-	-	24100	N[7]
LEAD	91/161	5.5 - 16300	12.3 - 100	446	BC-SB8	400[8]	N	-	500	1000	344	Y
MAGNESIUM	42/42	1190 - 86000	0 - 0	10400	BC-SB8	-	-	-	-	-	5690	N
MANGANESE	42/42	47.5 - 586	0 - 0	280	HR20	180	N	-	1600	47000	660	N[9]
MERCURY	21/40	0.2 - 1.4	0.08 - 1	0.47	HB01	2.3	N	10	20	610	0.28	N
NICKEL	42/42	4.1 - 552	0 - 0	51	BC-SB8	160	N	13000	1400	7500	40.4	N
POTASSIUM	36/42	549 - 8600	263 - 5260	3000	HB08	-	-	-	-	-	2680	N
SELENIUM	3/37	1.5 - 3.9	0.34 - 4.3	1	HB04	39	N	-	340	10000	3.3	N
SILVER	7/34	0.61 - 24.2	0.32 - 3.3	2	HB22	39	N	-	340	10000	3.3	N
SODIUM	37/42	173 - 45400	278 - 2690	10400	HB08	-	-	-	-	-	248	N
THALLIUM	2/36	3.4 - 4.4	0.42 - 8.2	1	HB02	0.55	N	-	5.4	160	ND	N
VANADIUM	41/42	7.1 - 74.1	60.8 - 60.8	37	HB04	55	N	-	470	14000	81.9	N
ZINC	42/42	16.6 - 2710	0 - 0	364	BC-SB8	2300	N	-	20000	610000	604	Y
Dioxin (ug/kg)												
TOXICITY EQUIVALENCY FACTOR	30/32	0.000200414 - 8.6	0.40144 - 0.4886315	0.38	BC-SB8	0.0043	C	-	-	-	-	Y
Asbestos (%)												
ASBESTOS	23/135	0.99 - 60	0.1 - 0.1	1	BC-SB8	1	C	-	-	-	-	Y

Notes:
1) Based on current USEPA Region III guidance (USEPA Region III, 10-1-99). Residential Soil Ingestion is used for soil and sediment. Value for noncarcinogens is based on a target hazard quotient of O.I. Value for carcinogens is based on a cancer risk of IE-6.
2) COPC screening level based on noncarcinogenic (N)/carcinogenic (C) effects.
3) USEPA Soil Screening Levels (USEPA, May 1996).
4) CTDEP, January 1996. In some cases, calculated or surrogate or celling value presented as detailed in Table 6-1.
5) Maximum background concentrations presented for inorganics only because background concentrations for organics were not used in COPC selection.
6) COPC selection criteria discussed in Section 6.2 and presented/defined in Table 6-1. Chemical was selected as a COPC (Y = yes) if maximum detected concentration exceeded screening levels, except that noncarcinogenic inorganics detected at concentrations exceeding screening levels (based on Region III criteria) but less than Region III risk-based concentrations AND maximum background concentration were not selected as COPCs.
7) USEPA Region I does not advocate quantitative risk assessment of aluminum or iron.
8) Value is based on OSWER soil screening level for residential land use (USEPA, July 14, 1994).
9) Maximum concentration exceeds COPC screening level, but below Region III RBC AND maximum background concentrations.

ND Compound was not present at detectable concentrations in background samples.
- Not available or not applicable.

TABLE 6-24A
COMPARISON OF MAXIMUM CONCENTRATIONS TO GROUNDWATER PROTECTION BENCHMARKS
AREA C, HOUSATONIC BOAT CLUB WETLANDS AREA
SURFACE SOIL/SEDIMENT
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	SSL Migration To Groundwater (1)	State Pollutant Mobility (GB) (2)
Volatile Organic Compounds (ug/kg)							
1,2-DICHLOROETHENE (TOTAL)	1/21	11 - 11	12 - 32	10	HB01	400	14000
2-BUTANONE	2/21	20 - 20	12 - 37	10	HB10, HB11	-	80000
ACETONE	6/29	27 - 230	12 - 190	49	HB18	16000	140000
CARBON DISULFIDE	15/27	2 - 60	12 - 32	12	HB8A	32000	140000
TOLUENE	3/22	1 - 32	12 - 32	10	HB07	12000	67000
Semivolatile Organic Compounds (ug/kg)							
1,2,4-TRICHLOROBENZENE	1/24	80 - 80	190 - 2300	420	HB22	5000	14000
1,4-DICHLOROBENZENE	1/24	79 - 79	190 - 2300	420	HB22	2000	15000
2-METHYLNAPHTHALENE	4/24	36 - 955	190 - 2300	380	HB01	-	56000
4-CHLORO-3-METHYLPHENOL	1/24	55 - 55	190 - 2300	420	HB22	-	-
4-METHYLPHENOL	2/24	325 - 935	190 - 2300	420	HB01	-	7000
ACENAPHTHENE	6/24	33 - 920	190 - 2300	370	HB01	570000	84000
ACENAPHTHYLENE	16/29	110 - 1500	190 - 1300	410	HB07	-	84000
ANTHRACENE	20/25	42 - 1500	590 - 1100	360	HB01	12000000	400000
BENZO(A)ANTHRACENE	31/31	68 - 4100	0 - 0	1000	HB13	2000	1000
BENZO(A)PYRENE	29/31	63 - 3900	650 - 1100	970	HB07	8000	1000
BENZO(B)FLUORANTHENE	32/32	160 - 6900	0 - 0	1500	HB07	5000	1000
BENZO(G,H,I)PERYLENE	22/28	95 - 2500	210 - 1100	840	HB13	-	40000
BENZO(K)FLUORANTHENE	24/28	150 - 2200	430 - 1100	700	HB14	49000	1000
BIS(2-ETHYLHEXYL)PHTHALATE	20/29	140 - 6300	190 - 1500	790	HB03	3600000	11000
BUTYLBENZYL PHTHALATE	2/24	200 - 280	190 - 2300	410	HB11	930000	200000
CARBAZOLE	9/25	40 - 1000	190 - 2300	340	HB01	600	360
CHRYSENE	31/31	110 - 4900	0 - 0	1400	HB03	160000	960
DI-N-BUTYL PHTHALATE	14/29	24 - 12000	160 - 2090	1300	HB13	2300000	140000
DI-N-OCTYL PHTHALATE	4/25	37 - 900	190 - 2300	410	HB01	10000000	20000
DIBENZO(A,H)ANTHRACENE	21/29	24 - 1300	210 - 1025	320	HB01	2000	0.96
DIBENZOFURAN	3/24	43 - 836	190 - 2300	390	HB01	-	5600
DIETHYL PHTHALATE	1/24	1200 - 1200	190 - 2300	430	HB01	470000	1100000
DIMETHYL PHTHALATE	1/24	900 - 900	190 - 2300	420	HB01	-	14000000
FLUORANTHENE	26/31	180 - 5300	540 - 1300	1300	HB07	4300000	56000

TABLE 6-24A (continued)
COMPARISON OF MAXIMUM CONCENTRATIONS TO GROUNDWATER PROTECTION BENCHMARKS
AREA C, HOUSATONIC BOAT CLUB WETLANDS AREA
SURFACE SOIL/SEDIMENT
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	SSL Migration To Groundwater (1)	State Pollutant Mobility (GB) (2)
FLUORENE	13/25	40 - 930	190 - 1100	260	HB01	560000	56000
INDENO(1,2,3-CD)PYRENE	28/31	29 - 2400	210 - 650	700	HB13	14000	9.6
N-NITROSODIPHENYLAMINE	9/25	34 - 1450	190 - 2300	390	HB01	1000	1400
NAPHTHALENE	4/24	45 - 965	190 - 2300	390	HB01	84000	56000
PENTACHLOROPHENOL	1/24	73 - 73	470 - 5500	1000	HB22	30	1000
PHENANTHRENE	30/30	58 - 4100	0 - 0	810	HB13	-	40000
PHENOL	2/24	540 - 1100	190 - 2300	460	HB3A	100000	800000
PYRENE	32/32	95 - 10000	0 - 0	2200	HB07	4200000	40000
Pesticides/PCBs (ug/kg)							
4,4'-DDD	18/35	0.34 - 20	3.3 - 45	6	HB15	16000	29
4,4'-DDE	25/35	0.7 - 29	1.6 - 45	4	HB19	54000	21
4,4'-DDT	17/35	0.12 - 21	1.6 - 45	6	HB07, HB13	32000	21
ALDRIN	20/35	0.05 - 1.7	1.3 - 23	1	HB13	500	0.41
ALPHA-BHC	17/35	0.092 - 1.1	1.2 - 23	2	HB3A	0.5	1.1
ALPHA-CHLORDANE	20/34	0.41 - 9.5	0.85 - 23	3	HB13	10000	66
	25/35	32 - 11900	18 - 500	1400	HB03		
	25/35	182.7 - 12345	16 - 450	1600	HB03		
AROCLOR-1260	1/35	73 - 73	16 - 450	43	HB20	-	-
AROCLOR-1262	17/35	25.2 - 6100	16 - 450	550	HB03	-	-
AROCLOR-1268	21/35	25 - 8900	16 - 450	840	HB04	-	-
BETA-BHC	3/35	0.24 - 2	0.85 - 23	2	HB01	3	3.9
DELTA-BHC	5/35	0.25 - 3.9	0.85 - 23	2	HB11	-	1.1
DIELDRIN	24/34	0.11 - 14	1.8 - 45	4	HB07	4	7
ENDOSULFAN I	2/35	0.083 - 3.6	1.2 - 23	2	C-SD03	18000	8400
ENDOSULFAN II	10/35	0.36 - 25	2.2 - 45	6	HB13	18000	8400
ENDOSULFAN SULFATE	8/34	0.51 - 45	2.2 - 45	6	HB3A	-	8400
ENDRIN	11/35	0.38 - 15	2.5 - 45	5	HB03	1000	-
ENDRIN ALDEHYDE	13/35	0.79 - 190	1.6 - 45	20	HB04	-	-
ENDRIN KETONE	4/35	0.15 - 2.6	1.6 - 45	4	HBC 002	-	-
GAMMA-BHC (LINDANE)	12/35	0.19 - 2.3	0.85 - 23	2	C-SD03, HB02	9	40
GAMMA-CHLORDANE	25/35	0.12 - 9.7	0.85 - 23	3	C-SS02	10000	66

TABLE 6-24A (continued)
COMPARISON OF MAXIMUM CONCENTRATIONS TO GROUNDWATER PROTECTION BENCHMARKS
AREA C, HOUSATONIC BOAT CLUB WETLANDS AREA
SURFACE SOIL/SEDIMENT
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	SSL Migration To Groundwater (1)	State Pollutant Mobility (GB) (2)
HEPTACHLOR	6/35	0.21 - 0.85	0.85 - 23	2	HB15	23000	13
HEPTACHLOR EPOXIDE	12/35	0.03 - 6.8	1.2 - 23	2	HB07	700	20
METHOXYCHLOR	6/35	12.9 - 240	8.5 - 230	31	HB07	160000	8000
Metals (mg/kg)							
ALUMINUM	34/34	2430 - 20700	0 - 0	12100	C-SD04	-	-
ANTIMONY	3/26	0.52 - 12.1	1.2 - 22.3	3	C-SD01	5	-
ARSENIC	25/33	1.8 - 18.2	1.5 - 20.1	8	HB03	29	-
BARIUM	33/34	13.2 - 7020	9.3 - 9.3	630	HB04	1600	-
BERYLLIUM	16/30	0.17 - 2	0.21 - 1.2	0.5	HR20	63	-
CADMIUM	8/27	0.43 - 5.2	0.3 - 1.7	1	HB02	8	-
CALCIUM	29/34	294 - 5940	2250 - 3950	2970	HB08	-	-
CHROMIUM	34/34	7.5 - 823	0 - 0	218	HB02	38	-
COBALT	34/34	1.7 - 16.6	0 - 0	10	C-SD01, HB01	-	-
COPPER	35/35	20.6 - 12700	0 - 0	1600	HB3A	-	-
IRON	34/34	7240 - 40000	0 - 0	23600	HB02	-	-
LEAD	78/116	27.2 - 7860	100 - 100	387	HB3A	-	-
MAGNESIUM	34/34	1400 - 35500	0 - 0	9300	HB04	-	-
MANGANESE	34/34	79.4 - 586	0 - 0	290	HR20	-	-
MERCURY	19/32	0.25 - 1.4	0.08 - 1	1	HB01	2	-
NICKEL	34/34	6 - 164	0 - 0	42	HB3A	130	-
POTASSIUM	29/34	559 - 8600	478 - 5260	3290	HB08	-	-
SELENIUM	3/29	1.5 - 3.9	0.34 - 4.3	1	HB04	5	-
SILVER	6/26	0.61 - 24.2	0.32 - 3.3	2	HB22	34	-
SODIUM	31/34	173 - 45400	1770 - 2690	12100	HB08	-	-
THALLIUM	2/28	3.4 - 4.4	0.42 - 8.2	2	HB02	0.7	-
VANADIUM	33/34	10.7 - 74.1	60.8 - 60.8	40	HB04	6000	-
ZINC	34/34	16.9 - 1440	0 - 0	328	HB3A	12000	-

TABLE 6-24A (continued)
COMPARISON OF MAXIMUM CONCENTRATIONS TO GROUNDWATER PROTECTION BENCHMARKS
AREA C, HOUSATONIC BOAT CLUB WETLANDS AREA
SURFACE SOIL/SEDIMENT
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	SSL Migration To Groundwater (1)	State Pollutant Mobility (GB) (2)
Dioxin (ug/kg)							
TOXICITY EQUIVALENCY FACTOR	28/28	0.000514326 - 1.829908	0 - 0	0.11	HB07	-	-
Asbestos (%)							
ASBESTOS	13/90	0.99 - 60	0.1 - 0.1	1	BC-SB8	-	-
Total Organic Carbon (mg/kg)							
TOTAL ORGANIC CARBON	4/4	36400 - 61100	-	50275	OU3-C-SD03-0002	-	-

Notes:
1) USEPA Soil Screening Levels (USEPA, May 1996). Values associated with dilution and attenuation factor (DAF) of 20 are used.
2) CTDEP, January 1996. State Pollutant Mobility criteria for metals and PCBs are not included since direct comparison of the aqueous SPLP criteria (in ug/L) and the soil analytical results (in ug/kg or mg/kg) cannot be made. TCLP and SPLP results for soil samples are presented in a separate table. In some cases, calculated or surrogate or ceiling value presented as detailed in Table 6-1.
- Not available or not applicable.

TABLE 6-24B
COMPARISON OF MAXIMUM CONCENTRATIONS TO GROUNDWATER PROTECTION BENCHMARKS
AREA C, HOUSATONIC BOAT CLUB WETLANDS AREA
ALL SOIL/SEDIMENT (0-15')
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	SSL Migration To Groundwater (1)	State Pollutant Mobility (GB) (2)
Volatile Organic Compounds (ug/kg)							
1,2-DICHLOROETHENE (TOTAL)	1/26	11 - 11	11 - 38	10	HB01	400	14000
2-BUTANONE	3/26	20 - 42	11 - 37	11	BC-SB8	-	80000
2-HEXANONE	1/26	11 - 11	11 - 32	9	BC-SB8		56000
4-METHYL-2-PENTANONE	1/26	30 - 30	11 - 32	10	BC-SB8		14000
ACETONE	6/34	27 - 230	11 - 200	45	HB18	16000	140000
CARBON DISULFIDE	16/32	2 - 60	12 - 38	11	HB8A	32000	140000
CHLOROBENZENE	1/26	7 - 7	11 - 32	9	BC-SB8	1000	20000
ETHYLBENZENE	1/26	34 - 34	11 - 32	10	BC-SB8		10100
TOLUENE	5/27	1 - 750	11 - 32	37	BC-SB8	12000	67000
XYLENES, TOTAL	1/26	310 - 310	11 - 32	21	BC-SB8	190000	19500
Semivolatile Organic Compounds (ug/kg)							
1,2,4-TRICHLOROBENZENE	1/32	80 - 80	170 - 3200	410	HB22	5000	14000
1,4-DICHLOROBENZENE	1/32	79 - 79	170 - 3200	410	HB22	2000	15000
2,4-DIMETHYLPHENOL	1/32	19000 - 19000	170 - 2300	960	BC-SB8		28000
2-METHYLNAPHTHALENE	6/32	36 - 955	170 - 2300	340	HB01	-	56000
2-METHYLPHENOL	1/32	880 - 880	170 - 2300	390	BC-SB8		70000
4-CHLORO-3-METHYLPHENOL	1/32	55 - 55	170 - 3200	410	HB22	-	-
4-METHYLPHENOL	4/32	81 - 1700	170 - 2300	400	BC-SB8	-	7000
ACENAPHTHENE	7/32	33 - 920	170 - 3200	360	HB01	570000	84000
ACENAPHTHYLENE	17/37	110 - 1500	170 - 3200	390	HB07	-	84000
ANTHRACENE	22/30	42 - 1500	400 - 1100	350	HB01	12000000	400000
BENZO(A)ANTHRACENE	34/39	52 - 4100	170 - 410	900	HB13	2000	1000
BENZO(A)PYRENE	31/39	54 - 3900	170 - 3200	870	HB07	8000	1000
BENZO(B)FLUORANTHENE	34/40	43 - 6900	170 - 3200	1300	HB07	5000	1000
BENZO(G,H,I)PERYLENE	23/36	95 - 2500	170 - 3200	740	HB13	-	40000
BENZO(K)FLUORANTHENE	26/36	64 - 2200	170 - 3200	670	C-SD01, HB14	49000	1000
BIS(2-ETHYLHEXYL)PHTHALATE	20/37	140 - 6300	170 - 3200	730	HB03	3600000	11000
BUTYLBENZYL PHTHALATE	2/32	200 - 280	170 - 3200	400	HB11	930000	200000
CARBAZOLE	11/33	40 - 1000	170 - 2300	300	HB01	600	360
CHRYSENE	34/39	54 - 16000	170 - 410	1600	BC-SB8	160000	960
DI-N-BUTYL PHTHALATE	16/37	24 - 12000	160 - 2090	1000	HB13	2300000	140000

TABLE 6-24B (continued)
COMPARISON OF MAXIMUM CONCENTRATIONS TO GROUNDWATER PROTECTION BENCHMARKS
AREA C, HOUSATONIC BOAT CLUB WETLANDS AREA
ALL SOIL/SEDIMENT (0-15')
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	SSL Migration To Groundwater (1)	State Pollutant Mobility (GB) (2)
DI-N-OCTYL PHTHALATE	4/33	37 - 900	170 - 3200	400	HB01	10000000	20000
DIBENZO(A,H)ANTHRACENE	22/37	24 - 1300	170 - 3200	330	HB01	2000	0.96
DIBENZOFURAN	3/32	43 - 836	170 - 3200	380	HB01	-	5600
DIETHYL PHTHALATE	1/32	1200 - 1200	170 - 3200	420	HB01	470000	1100000
DIMETHYL PHTHALATE	1/32	900 - 900	170 - 3200	410	HB01	-	14000000
FLUORANTHENE	29/39	91 - 5300	170 - 1300	1200	HB07	4300000	56000
FLUORENE	15/33	40 - 1300	170 - 1100	270	BC-SB8	560000	56000
INDENO(1,2,3-CD)PYRENE	29/39	29 - 2400	170 - 3200	630	HB13	14000	9.6
N-NITROSODIPHENYLAMINE	11/33	34 - 3000	170 - 2300	440	BC-SB8	1000	1400
NAPHTHALENE	6/32	45 - 2300	170 - 2300	400	BC-SB8	84000	56000
PENTACHLOROPHENOL	1/32	73 - 73	430 - 7700	1000	HB22	30	1000
PHENANTHRENE	32/38	58 - 4200	170 - 410	810	BC-SB8	-	40000
PHENOL	4/32	59 - 1900	170 - 2300	440	BC-SB8	100000	800000
PYRENE	34/40	95 - 10000	170 - 3200	1900	HB07	4200000	40000
Pesticides/PCBs (ug/kg)							
4,4'-DDD	19/43	0.34 - 20	1.9 - 290	9	HB15	16000	29
4,4'-DDE	26/43	0.7 - 42	1.6 - 290	8	C-SD03	54000	21
4,4'-DDT	18/43	0.12 - 21	1.6 - 290	9	HB07, HB13	32000	21
ALDRIN	21/43	0.05 - 1.7	0.98 - 150	3	HB13	500	0.41
ALPHA-BHC	17/43	0.092 - 1.1	0.98 - 150	3	HB3A	0.5	1.1
ALPHA-CHLORDANE	21/42	0.41 - 58	0.85 - 150	6	C-SD03	10000	66
Aroclor, Total	32/43	19.2 - 531600	18 - 500	14000	BC-SB8		-
Aroclor, Total (Conservative)	32/43	151.7 - 541850	16 - 450	14000	BC-SB8		-
AROCLOR-1242	1/43	7400 - 7400	16 - 2900	240	C-SD03	-	-
AROCLOR-1248	1/43	330 - 330	16 - 2900	81	C-SD01	-	-
AROCLOR-1254	2/43	72 - 1600	16 - 450	79	BC-SB8	-	-
AROCLOR-1260	1/43	73 - 73	16 - 2900	75	HB20	-	-
AROCLOR-1262	22/43	11 - 230000	16 - 450	5800	BC-SB8	-	-
AROCLOR-1268	25/43	8.2 - 300000	16 - 450	7700	BC-SB8	-	-
BETA-BHC	3/43	0.24 - 2	0.85 - 150	4	HB01	3	3.9
DELTA-BHC	6/43	0.25 - 4.2	0.85 - 150	4	C-SD01	-	1.1

TABLE 6-24B (continued)
COMPARISON OF MAXIMUM CONCENTRATIONS TO GROUNDWATER PROTECTION BENCHMARKS
AREA C, HOUSATONIC BOAT CLUB WETLANDS AREA
ALL SOIL/SEDIMENT (0-15')
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	SSL Migration To Groundwater (1)	State Pollutant Mobility (GB) (2)
DIELDRIN	26/42	0.11 - 14	1.8 - 290	7	HB07	4	7
ENDOSULFAN I	3/43	0.063 - 3.6	1.2 - 150	4	C-SD03	18000	8400
ENDOSULFAN II	11/43	0.36 - 25	2.2 - 290	9	HB13	18000	8400
ENDOSULFAN SULFATE	8/42	0.51 - 45	1.9 - 290	9	HB3A	-	8400
ENDRIN	14/43	0.06 - 15	2.5 - 290	8	HB03	1000	-
ENDRIN ALDEHYDE	14/43	0.79 - 190	1.6 - 290	20	HB04	-	-
ENDRIN KETONE	5/43	0.15 - 9.2	1.6 - 290	7	C-SD01	-	-
GAMMA-BHC (LINDANE)	13/43	0.19 - 2.3	0.85 - 150	4	C-SD03, HB02	9	40
GAMMA-CHLORDANE	27/43	0.12 - 32	0.85 - 23	3	BC-SB8	10000	66
HEPTACHLOR	6/43	0.21 - 0.85	0.85 - 150	4	HB15	23000	13
HEPTACHLOR EPOXIDE	15/43	0.03 - 11	1.2 - 150	4	C-SD03	700	20
METHOXYCHLOR	7/43	12.9 - 1200	8.5 - 1500	73	C-SD03	160000	8000
Metals (mg/kg)							
ALUMINUM	42/42	2380 - 21600	0 - 0	11400	C-SD01	-	-
ANTIMONY	4/34	0.52 - 13.9	1.2 - 22.3	3	C-SD01	5	-
ARSENIC	33/41	0.79 - 18.2	1.5 - 20.1	7	HB03	29	-
BARIUM	41/42	11.6 - 13900	9.3 - 9.3	849	BC-SB8	1600	-
BERYLLIUM	19/38	0.17 - 2	0.09 - 1.2	0.4	HR20	63	-
CADMIUM	10/35	0.43 - 5.3	0.23 - 1.7	1	C-SD01	8	-
CALCIUM	37/42	294 - 5940	2250 - 3950	2850	C-SD01, HB08	-	-
CHROMIUM	42/42	3.6 - 950	0 - 0	205	C-SD01	38	-
COBALT	41/42	1.7 - 38.3	1.6 - 1.6	10	BC-SB8	-	-
COPPER	48/49	14.5 - 25100	300 - 300	2000	BC-SB8	-	-
IRON	42/42	4610 - 43000	0 - 0	22500	C-SD01	-	-
LEAD	91/161	5.5 - 16300	12.3 - 100	446	BC-SB8	-	-
MAGNESIUM	42/42	1190 - 86000	0 - 0	10400	BC-SB8	-	-
MANGANESE	42/42	47.5 - 586	0 - 0	280	HR20	-	-
MERCURY	21/40	0.2 - 1.4	0.08 - 1	0.5	HB01	2	-
NICKEL	42/42	4.1 - 552	0 - 0	51	BC-SB8	130	-
POTASSIUM	36/42	549 - 8600	263 - 5260	3000	HB08	-	-
SELENIUM	3/37	1.5 - 3.9	0.34 - 4.3	1	HB04	5	-

TABLE 6-24B (continued)
COMPARISON OF MAXIMUM CONCENTRATIONS TO GROUNDWATER PROTECTION BENCHMARKS
AREA C, HOUSATONIC BOAT CLUB WETLANDS AREA
ALL SOIL/SEDIMENT (0-15')
DRAFT FINAL REMEDIAL INVESTIGATION - AREA II
RAYMARK - FERRY CREEK - OU3
STRATFORD, CONNECTICUT

Parameter	Frequency	Range Of Detects	Range Of Nondetects	Average	Location of Maximum	SSL Migration To Groundwater (1)	State Pollutant Mobility (GB) (2)
SILVER	7/34	0.61 - 24.2	0.32 - 3.3	2	HB22	34	-
SODIUM	37/42	173 - 45400	278 - 2690	10400	HB08	-	-
THALLIUM	2/36	3.4 - 4.4	0.42 - 8.2	1	HB02	0.7	-
VANADIUM	41/42	7.1 - 74.1	60.8 - 60.8	37	HB04	6000	-
ZINC	42/42	16.6 - 2710	0 - 0	364	BC-SB8	12000	-
Dioxin (ug/kg)							
TOXICITY EQUIVALENCY FACTOR	30/32	0.000200414 - 8.6	0.40144 - 0.4886315	0.38	BC-SB8	-	-
Asbestos (%)							
ASBESTOS	23/135	0.99 - 60	0.1 - 0.1	1	BC-SB8	-	-

Notes:

1) USEPA Soil Screening Levels (USEPA, May 1996). Values associated with dilution and attenuation factor (DAF) of 20 are used.
2) CTDEP, January 1996. State Pollutant Mobility criteria for metals and PCBs are not included since direct comparison of the aqueous SPLP criteria (in ug/L) and the soil analytical results (in ug/kg or mg/kg) cannot be made. TCLP and SPLP results for soil samples are presented in a separate table. In some cases, calculated or surrogate or ceiling value presented as detailed in Table 6-1.

- Not available or not applicable.