

Table C-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-WV	TB-WV	TB-WV	TB-WV	TB-WV	TB-WV
Depth Below Grade (ft.)				(0.0-0.3)	(0.3-0.6)	(2-2.6)	(2.6-4.6)	(4.6-6.6)	(15-17)
Sample Collection Date				4/2/2002	4/2/2002	4/2/2002	4/2/2002	4/2/2002	4/2/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NT
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NT
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NT
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NT
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	NT	NT	NT	NT	NT
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT	NT
Copper	NA	NA	13	NT	NT	NT	NT	NT	NT
Lead	NA	NA	0.15	NT	NT	NT	NT	NT	NT
Mercury	NA	NA	0.02	NT	NT	NT	NT	NT	NT
Nickel	NA	NA	1.0	NT	NT	NT	NT	NT	NT
Selenium	NA	NA	0.50	NT	NT	NT	NT	NT	NT
Thallium	NA	NA	0.05	NT	NT	NT	NT	NT	NT
Vanadium	NA	NA	0.50	NT	NT	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	NT	NT	NT
Arsenic	10	10	NA	NT	NT	NT	NT	NT	NT
Barium	4,700	140,000	NA	NT	NT	NT	NT	NT	NT
Beryllium	2	2	NA	NT	NT	NT	NT	NT	NT
Cadmium	34	1,000	NA	NT	NT	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	NT	NT	NT	NT
Lead	500	1,000	NA	NT	NT	NT	NT	NT	NT
Mercury	20	610	NA	NT	NT	NT	NT	NT	NT
Nickel	1,400	7,500	NA	NT	NT	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	NT	NT	NT	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/Commercial	GB Area	TB-VVV	TB-VVV	TB-VVV	TB-VVV	TB-VVV	TB-VVV
Depth Below Grade (ft.)				(0.0-0.3)	(0.3-0.6)	(2-2.6)	(2.6-4.6)	(4.6-6.6)	(15-17)
Sample Collection Date				4/2/2002	4/2/2002	4/2/2002	4/2/2002	4/2/2002	4/2/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	NT	NT	NT
Thallium	5.4	160	NA	NT	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	NT	NT	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

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Comparison of Test Boring Soil Sample Analyte Concentrations
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QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-VVV	TB-WWW	TB-WWW	TB-WWW	TB-WWW	TB-WWW
Depth Below Grade (ft.)			GB Area	(25-27)	(0.0-0.3)	(0.3-2)	(2-4)	(4-6)	(20-22)
Sample Collection Date				4/2/2002	4/2/2002	4/2/2002	4/2/2002	4/2/2002	4/2/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	ND<0.20	NT	NT	NT	NT	ND<0.20
Acenaphthylene	1,000	2,500	84	ND<0.20	NT	NT	NT	NT	ND<0.20
Anthracene	1,000	2,500	400	ND<0.20	NT	NT	NT	NT	ND<0.20
Benzo[a]anthracene	1	7.8	1	ND<0.20	NT	NT	NT	NT	ND<0.20
Benzo[a]pyrene	1	1	1	ND<0.20	NT	NT	NT	NT	ND<0.20
Benzo[b]fluoranthene	1	7.8	1	ND<0.20	NT	NT	NT	NT	ND<0.20
Benzo[g,h,i]perylene	1,000	2,500	42	ND<0.20	NT	NT	NT	NT	ND<0.20
Benzo[k]fluoranthene	8.4	78	1	ND<0.20	NT	NT	NT	NT	ND<0.20
Chrysene	84	780	1	ND<0.20	NT	NT	NT	NT	ND<0.20
Dibenz[a,h]anthracene	1	1	1	ND<0.20	NT	NT	NT	NT	ND<0.20
Fluoranthene	1,000	2,500	56	ND<0.20	NT	NT	NT	NT	ND<0.20
Fluorene	1,000	2,500	56	ND<0.20	NT	NT	NT	NT	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	ND<0.20	NT	NT	NT	NT	ND<0.20
Naphthalene	1,000	2,500	56	ND<0.20	NT	NT	NT	NT	ND<0.20
Phenanthrene	1,000	2,500	40	ND<0.20	NT	NT	NT	NT	ND<0.20
Pyrene	1,000	2,500	40	ND<0.20	NT	NT	NT	NT	ND<0.20
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	NT	ND<0.005	NT	ND<0.005
Isopropylbenzene	500	1,000	132	NT	NT	NT	ND<0.005	NT	ND<0.005
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	0.17	NT	0.0076
Naphthalene	1,000	2,500	56	NT	NT	NT	0.05	NT	ND<0.005
n-Propylbenzene	500	1,000	14	NT	NT	NT	ND<0.005	NT	ND<0.005
Tetrachloroethene	12	110	1	NT	NT	NT	ND<0.005	NT	ND<0.005
Toluene	500	1,000	67	NT	NT	NT	ND<0.005	NT	ND<0.005
Trichloroethene	56	520	1.0	NT	NT	NT	ND<0.005	NT	ND<0.005
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	ND<0.005	NT	ND<0.005
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.005	NT	ND<0.005
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.005	NT	ND<0.005
Xylenes (total)	500	1,000	19.5	NT	NT	NT	ND<0.005	NT	ND<0.005

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	Residential	Industrial/ Commercial		TB-VVV	TB-WWW	TB-WWW	TB-WWW	TB-WWW	TB-WWW
Depth Below Grade (ft.)			GB Area	(25-27)	(0.0-0.3)	(0.3-2)	(2-4)	(4-6)	(20-22)
Sample Collection Date				4/2/2002	4/2/2002	4/2/2002	4/2/2002	4/2/2002	4/2/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	NT	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	NT	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	NT	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	NT	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	NT	NT	NT	NT	NT
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT	NT
Copper	NA	NA	13	NT	NT	NT	NT	NT	NT
Lead	NA	NA	0.15	NT	NT	NT	NT	NT	NT
Mercury	NA	NA	0.02	NT	NT	NT	NT	NT	NT
Nickel	NA	NA	1.0	NT	NT	NT	NT	NT	NT
Selenium	NA	NA	0.50	NT	NT	NT	NT	NT	NT
Thallium	NA	NA	0.05	NT	NT	NT	NT	NT	NT
Vanadium	NA	NA	0.50	NT	NT	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	NT	NT	NT
Arsenic	10	10	NA	NT	NT	NT	NT	NT	NT
Barium	4,700	140,000	NA	NT	NT	NT	NT	NT	NT
Beryllium	2	2	NA	NT	NT	NT	NT	NT	NT
Cadmium	34	1,000	NA	NT	NT	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	NT	NT	NT	NT
Lead	500	1,000	NA	NT	NT	NT	NT	NT	NT
Mercury	20	610	NA	NT	NT	NT	NT	NT	NT
Nickel	1,400	7,500	NA	NT	NT	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	NT	NT	NT	NT

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	Residential	Industrial/Commercial	GB Area	TB-WVV	TB-WWW	TB-WWW	TB-WWW	TB-WWW	TB-WWW
Depth Below Grade (ft.)				(25-27)	(0.0-0.3)	(0.3-2)	(2-4)	(4-6)	(20-22)
Sample Collection Date				4/2/2002	4/2/2002	4/2/2002	4/2/2002	4/2/2002	4/2/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	NT	NT	NT
Thallium	5.4	160	NA	NT	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	NT	NT	ND<50

Notes:

- mg/kg = milligrams per kilogram.
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- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
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Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-XXX/ MW-L	TB-XXX/ MW-L	TB-XXX/ MW-L	TB-XXX/ MW-L	TB-XXX/ MW-L	TB-XXX/ MW-L
Depth Below Grade (ft.)				(0.0-0.3)	(0.3-1.3)	(2.3-4.3)	(4.3-6.3)	(10-12)	(15-16)
Sample Collection Date				4/2/2002	4/2/2002	4/2/2002	4/2/2002	4/2/2002	4/2/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	ND<0.20	ND<0.20	ND<0.20	NT	NT	NT
Acenaphthylene	1,000	2,500	84	ND<0.20	ND<0.20	ND<0.20	NT	NT	NT
Anthracene	1,000	2,500	400	0.25	ND<0.20	0.49	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	1.6	0.47	4.8	NT	NT	NT
Benzo[a]pyrene	1	1	1	1.7	0.47	4.2	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	2.9	0.80	5.6	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	0.82	0.20	1.4	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	0.97	0.29	2.3	NT	NT	NT
Chrysene	84	780	1	1.6	0.45	4.0	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	0.26	ND<0.20	0.46	NT	NT	NT
Fluoranthene	1,000	2,500	56	3.3	0.80	8.7	NT	NT	NT
Fluorene	1,000	2,500	56	ND<0.20	ND<0.20	ND<0.20	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	0.95	0.26	1.8	NT	NT	NT
Naphthalene	1,000	2,500	56	0.22	ND<0.20	ND<0.20	NT	NT	NT
Phenanthrene	1,000	2,500	40	2.3	0.68	4.3	NT	NT	NT
Pyrene	1,000	2,500	40	2.5	0.61	6.7	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	ND<0.25	ND<0.005	ND<0.25	NT	NT	NT
Isopropylbenzene	500	1,000	132	ND<0.25	ND<0.005	ND<0.25	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	ND<0.25	ND<0.005	ND<0.25	NT	NT	NT
Naphthalene	1,000	2,500	56	ND<0.25	ND<0.005	ND<0.25	NT	NT	NT
n-Propylbenzene	500	1,000	14	ND<0.25	ND<0.005	ND<0.25	NT	NT	NT
Tetrachloroethene	12	110	1	ND<0.25	ND<0.005	ND<0.25	NT	NT	NT
Toluene	500	1,000	67	ND<0.25	ND<0.005	ND<0.25	NT	NT	NT
Trichloroethene	56	520	1.0	ND<0.25	0.013	ND<0.25	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	ND<0.25	ND<0.005	0.34	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	ND<0.25	ND<0.005	ND<0.25	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	ND<0.25	ND<0.005	ND<0.25	NT	NT	NT
Xylenes (total)	500	1,000	19.5	ND<0.25	0.011	ND<0.25	NT	NT	NT

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QE/English Station, New Haven, CT**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-XXX/ MW-L	TB-XXX/ MW-L	TB-XXX/ MW-L	TB-XXX/ MW-L	TB-XXX/ MW-L	TB-XXX/ MW-L
Depth Below Grade (ft.)			GB Area	(0.0-0.3)	(0.3-1.3)	(2.3-4.3)	(4.3-6.3)	(10-12)	(15-16)
Sample Collection Date				4/2/2002	4/2/2002	4/2/2002	4/2/2002	4/2/2002	4/2/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	1.5 ⁽¹⁾	1.2 ⁽¹⁾	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	ND<5.0
SPLP Metals									
Antimony	NA	NA	0.06	NT	ND<0.006	ND<0.006	NT	NT	ND<0.006
Arsenic	NA	NA	0.5	NT	ND<0.05	ND<0.05	NT	NT	ND<0.05
Barium	NA	NA	10	NT	0.38	0.34	NT	NT	0.22
Copper	NA	NA	13	NT	ND<0.04	ND<0.04	NT	NT	ND<0.04
Lead	NA	NA	0.15	NT	ND<0.013	ND<0.013	NT	NT	ND<0.013
Mercury	NA	NA	0.02	NT	ND<0.002	ND<0.002	NT	NT	ND<0.002
Nickel	NA	NA	1.0	NT	ND<0.05	ND<0.05	NT	NT	ND<0.05
Selenium	NA	NA	0.50	NT	ND<0.01	ND<0.01	NT	NT	ND<0.01
Thallium	NA	NA	0.05	NT	ND<0.005	ND<0.005	NT	NT	ND<0.005
Vanadium	NA	NA	0.50	NT	ND<0.05	ND<0.05	NT	NT	ND<0.05
Zinc	NA	NA	50	NT	0.48	0.14	NT	NT	2.3
Total Metals									
Antimony	27	8,200	NA	NT	ND<2.0	2.1	NT	NT	5.1
Arsenic	10	10	NA	97	140	280	71	89	12, 15 ⁽⁴⁾
Barium	4,700	140,000	NA	NT	67	36	NT	NT	18
Beryllium	2	2	NA	NT	ND<1.0	ND<1.0	NT	NT	ND<1.0
Cadmium	34	1,000	NA	NT	3.5	5.5	NT	NT	13
Chromium	100*	100*	NA	NT	13	7.6	NT	NT	6.3
Copper	2,500	76,000	NA	NT	110	38	NT	NT	1,600
Lead	500	1,000	NA	NT	81	100	NT	NT	510
Mercury	20	610	NA	NT	0.31	0.74	NT	NT	ND<0.20
Nickel	1,400	7,500	NA	NT	68	6.8	NT	NT	21
Selenium	340	10,000	NA	NT	5.6	4.1	NT	NT	ND<1.0

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	Residential	Industrial/Commercial		TB-XXX/ MW-L	TB-XXX/ MW-L	TB-XXX/ MW-L	TB-XXX/ MW-L	TB-XXX/ MW-L	TB-XXX/ MW-L
Depth Below Grade (ft.)			GB Area	(0.0-0.3)	(0.3-1.3)	(2.3-4.3)	(4.3-6.3)	(10-12)	(15-16)
Sample Collection Date				4/2/2002	4/2/2002	4/2/2002	4/2/2002	4/2/2002	4/2/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	ND<2.0	ND<2.0	NT	NT	ND<2.0
Thallium	5.4	160	NA	NT	20	29	NT	NT	24
Vanadium	470	14,000	NA	NT	630	31	NT	NT	7.6
Zinc	20,000	610,000	NA	NT	340	19	NT	NT	1,900
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	79	ND<50	ND<50	NT	NT	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
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- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
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Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-XXX/ MW-L	TB-YYY	TB-YYY	TB-YYY	TB-YYY	TB-YYY
Depth Below Grade (ft.)			GB Area	(16-17)	(0.0-0.3)	(0.3-1.3)	(2.3-3.3)	(3.3-4.3)	(5.3-6.3)
Sample Collection Date				4/2/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	NT	ND<0.20	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	NT	ND<0.20	NT
Anthracene	1,000	2,500	400	NT	NT	NT	NT	ND<0.20	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	NT	0.32	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	NT	0.39	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	NT	0.42	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	NT	0.33	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	NT	ND<0.20	NT
Chrysene	84	780	1	NT	NT	NT	NT	0.24	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	NT	ND<0.20	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	NT	0.37	NT
Fluorene	1,000	2,500	56	NT	NT	NT	NT	ND<0.20	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	NT	0.40	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	ND<0.20	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	NT	ND<0.20	NT
Pyrene	1,000	2,500	40	NT	NT	NT	NT	0.38	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	ND<0.25	NT	ND<0.005	NT
Isopropylbenzene	500	1,000	132	NT	NT	ND<0.25	NT	ND<0.005	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	ND<0.25	NT	ND<0.005	NT
Naphthalene	1,000	2,500	56	NT	NT	ND<0.25	NT	ND<0.005	NT
n-Propylbenzene	500	1,000	14	NT	NT	ND<0.25	NT	ND<0.005	NT
Tetrachloroethene	12	110	1	NT	NT	ND<0.25	NT	ND<0.005	NT
Toluene	500	1,000	67	NT	NT	ND<0.25	NT	ND<0.005	NT
Trichloroethene	56	520	1.0	NT	NT	ND<0.25	NT	ND<0.005	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	ND<0.25	NT	ND<0.005	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.25	NT	ND<0.005	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.25	NT	ND<0.005	NT
Xylenes (total)	500	1,000	19.5	NT	NT	ND<0.25	NT	ND<0.005	NT

Table AOC-12.2

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-XXX/ MW-L	TB-YYY	TB-YYY	TB-YYY	TB-YYY	TB-YYY
Depth Below Grade (ft.)			GB Area	(16-17)	(0.0-0.3)	(0.3-1.3)	(2.3-3.3)	(3.3-4.3)	(5.3-6.3)
Sample Collection Date				4/2/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	ND<0.50	9.4 ⁽¹⁾	3.1 ⁽²⁾	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	NT	ND<0.006	NT	ND<0.006	NT
Arsenic	NA	NA	0.5	NT	NT	ND<0.05	NT	0.12	NT
Barium	NA	NA	10	NT	NT	1.3	NT	0.59	NT
Copper	NA	NA	13	NT	NT	ND<0.04	NT	ND<0.04	NT
Lead	NA	NA	0.15	NT	NT	ND<0.013	NT	0.021	NT
Mercury	NA	NA	0.02	NT	NT	ND<0.002	NT	ND<0.002	NT
Nickel	NA	NA	1.0	NT	NT	ND<0.05	NT	ND<0.05	NT
Selenium	NA	NA	0.50	NT	NT	ND<0.01	NT	ND<0.01	NT
Thallium	NA	NA	0.05	NT	NT	ND<0.005	NT	0.010	NT
Vanadium	NA	NA	0.50	NT	NT	2.3	NT	8.7	NT
Zinc	NA	NA	50	NT	NT	1.1	NT	0.37	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	ND<2.0	NT	3.9	NT
Arsenic	10	10	NA	NT	NT	46	NT	130	NT
Barium	4,700	140,000	NA	NT	NT	73	NT	39	NT
Beryllium	2	2	NA	NT	NT	1.0	NT	1.2	NT
Cadmium	34	1,000	NA	NT	NT	1.9	NT	3.8	NT
Chromium	100*	100*	NA	NT	NT	21	NT	10	NT
Copper	2,500	76,000	NA	NT	NT	130	NT	39	NT
Lead	500	1,000	NA	NT	NT	210	NT	340	NT
Mercury	20	610	NA	NT	NT	ND<0.20	NT	ND<0.20	NT
Nickel	1,400	7,500	NA	NT	NT	550	NT	4.9	NT
Selenium	340	10,000	NA	NT	NT	ND<1.0	NT	ND<1.0	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-XXX/ MW-L	TB-YYY	TB-YYY	TB-YYY	TB-YYY	TB-YYY
Depth Below Grade (ft.)			GB Area	(16-17)	(0.0-0.3)	(0.3-1.3)	(2.3-3.3)	(3.3-4.3)	(5.3-6.3)
Sample Collection Date				4/2/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	ND<2.0	NT	2.7	NT
Thallium	5.4	160	NA	NT	NT	14	NT	30	NT
Vanadium	470	14,000	NA	NT	NT	1,400	NT	2,300	NT
Zinc	20,000	610,000	NA	NT	NT	120	NT	24	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	ND<50	NT	ND<50	ND<50

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.


Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-YYY	TB-YYY	TB-ZZZ	TB-ZZZ	TB-ZZZ
Depth Below Grade (ft.)					(11-12)	(15-17)	(0.0-0.3)	(0.3-1.3)	(2.3-4.3)
Sample Collection Date					4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	ND<0.20	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	ND<0.20	NT	NT
Anthracene	1,000	2,500	400	NT	NT	NT	ND<0.20	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	ND<0.20	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	0.20	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	0.22	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	ND<0.20	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	ND<0.20	NT	NT
Chrysene	84	780	1	NT	NT	NT	ND<0.20	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	ND<0.20	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	0.50	NT	NT
Fluorene	1,000	2,500	56	NT	NT	NT	ND<0.20	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	ND<0.20	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	ND<0.20	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	0.49	NT	NT
Pyrene	1,000	2,500	40	NT	NT	NT	0.37	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	NT	NT
Tetrachloroethene	12	110	1	NT	NT	NT	NT	NT	NT
Toluene	500	1,000	67	NT	NT	NT	NT	NT	NT
Trichloroethene	56	520	1.0	NT	NT	NT	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	NT	NT

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Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-YYY	TB-YYY	TB-ZZZ	TB-ZZZ	TB-ZZZ
Depth Below Grade (ft.)					(11-12)	(15-17)	(0.0-0.3)	(0.3-1.3)	(2.3-4.3)
Sample Collection Date					4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA		NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06		NT	NT	NT	ND<0.006	ND<0.006
Arsenic	NA	NA	0.5		NT	NT	NT	ND<0.05	ND<0.05
Barium	NA	NA	10		NT	NT	NT	0.20	0.21
Copper	NA	NA	13		NT	NT	NT	ND<0.04	ND<0.04
Lead	NA	NA	0.15		NT	NT	NT	ND<0.013	ND<0.013
Mercury	NA	NA	0.02		NT	NT	NT	ND<0.002	ND<0.002
Nickel	NA	NA	1.0		NT	NT	NT	ND<0.05	ND<0.05
Selenium	NA	NA	0.50		NT	NT	NT	ND<0.01	0.01
Thallium	NA	NA	0.05		NT	NT	NT	ND<0.005	ND<0.005
Vanadium	NA	NA	0.50		NT	NT	NT	0.21	ND<0.05
Zinc	NA	NA	50		NT	NT	NT	0.20	0.18
Total Metals									
Antimony	27	8,200	NA		NT	NT	NT	ND<2.0	3.1
Arsenic	10	10	NA		NT	NT	NT	8.3	180
Barium	4,700	140,000	NA		NT	NT	NT	25	62
Beryllium	2	2	NA		NT	NT	NT	ND<1.0	ND<1.0
Cadmium	34	1,000	NA		NT	NT	NT	0.76	4.3
Chromium	100*	100*	NA		NT	NT	NT	9.3	5.0
Copper	2,500	76,000	NA		NT	NT	NT	15	22
Lead	500	1,000	NA		NT	NT	NT	13	140
Mercury	20	610	NA		NT	NT	NT	ND<0.20	0.64
Nickel	1,400	7,500	NA		NT	NT	NT	12	2.5
Selenium	340	10,000	NA		NT	NT	NT	ND<1.0	4.0

Table AOC-12.2

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-YYY	TB-YYY	TB-ZZZ	TB-ZZZ	TB-ZZZ	TB-ZZZ
Depth Below Grade (ft.)			GB Area	(11-12)	(15-17)	(0.0-0.3)	(0.3-1.3)	(2.3-4.3)	(4.3-6.3)
Sample Collection Date				4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	ND<2.0	ND<2.0	NT
Thallium	5.4	160	NA	NT	NT	NT	5.8	27	NT
Vanadium	470	14,000	NA	NT	NT	NT	60	15	NT
Zinc	20,000	610,000	NA	NT	NT	NT	33	8.7	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	ND<50	ND<50	NT	NT	NT	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-ZZZ	TB-ZZZ	TB-AAAA	TB-AAAA	TB-AAAA	TB-AAAA
Depth Below Grade (ft.)			GB Area	(10-12)	(15-16)	(0.0-0.3)	(0.3-1.3)	(2.5-3)	(4-6)
Sample Collection Date				4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	ND<0.20	NT	ND<0.20	NT
Acenaphthylene	1,000	2,500	84	NT	NT	0.93	NT	ND<0.20	NT
Anthracene	1,000	2,500	400	NT	NT	0.46	NT	ND<0.20	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	3.6	NT	ND<0.20	NT
Benzo[a]pyrene	1	1	1	NT	NT	4.6	NT	ND<0.20	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	4.9	NT	ND<0.20	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	3.7	NT	ND<0.20	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	1.9	NT	ND<0.20	NT
Chrysene	84	780	1	NT	NT	3.5	NT	ND<0.20	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	0.83	NT	ND<0.20	NT
Fluoranthene	1,000	2,500	56	NT	NT	6.5	NT	ND<0.20	NT
Fluorene	1,000	2,500	56	NT	NT	ND<0.20	NT	ND<0.20	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	3.5	NT	ND<0.20	NT
Naphthalene	1,000	2,500	56	NT	NT	ND<0.20	NT	ND<0.20	NT
Phenanthrene	1,000	2,500	40	NT	NT	3.4	NT	ND<0.20	NT
Pyrene	1,000	2,500	40	NT	NT	7.3	NT	ND<0.20	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	0.49	ND<0.25	NT	ND<0.25
Isopropylbenzene	500	1,000	132	NT	NT	0.0078	ND<0.25	NT	ND<0.25
4-Isopropyltoluene	500	1,000	41.8	NT	NT	ND<0.005	ND<0.25	NT	ND<0.25
Naphthalene	1,000	2,500	56	NT	NT	ND<0.005	ND<0.25	NT	ND<0.25
n-Propylbenzene	500	1,000	14	NT	NT	0.0068	ND<0.25	NT	ND<0.25
Tetrachloroethene	12	110	1	NT	NT	ND<0.005	ND<0.25	NT	ND<0.25
Toluene	500	1,000	67	NT	NT	0.58	ND<0.25	NT	ND<0.25
Trichloroethene	56	520	1.0	NT	NT	ND<0.005	ND<0.25	NT	ND<0.25
1,1,1-Trichloroethane	500	1,000	40	NT	NT	ND<0.005	ND<0.25	NT	ND<0.25
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	0.016	ND<0.25	NT	ND<0.25
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	0.034	ND<0.25	NT	ND<0.25
Xylenes (total)	500	1,000	19.5	NT	NT	2.8	ND<0.25	NT	ND<0.25

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-ZZZ	TB-ZZZ	TB-AAAA	TB-AAAA	TB-AAAA
Depth Below Grade (ft.)					(10-12)	(15-16)	(0.0-0.3)	(0.3-1.3)	(2.5-3)
Sample Collection Date					4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	NT	ND<0.006	NT	ND<0.006	NT
Arsenic	NA	NA	0.5	NT	NT	ND<0.05	NT	ND<0.05	NT
Barium	NA	NA	10	NT	NT	0.29	NT	0.30	NT
Copper	NA	NA	13	NT	NT	ND<0.04	NT	ND<0.04	NT
Lead	NA	NA	0.15	NT	NT	0.036	NT	ND<0.013	NT
Mercury	NA	NA	0.02	NT	NT	ND<0.002	NT	ND<0.002	NT
Nickel	NA	NA	1.0	NT	NT	ND<0.05	NT	ND<0.05	NT
Selenium	NA	NA	0.50	NT	NT	ND<0.01	NT	ND<0.01	NT
Thallium	NA	NA	0.05	NT	NT	ND<0.005	NT	ND<0.005	NT
Vanadium	NA	NA	0.50	NT	NT	ND<0.05	NT	ND<0.05	NT
Zinc	NA	NA	50	NT	NT	0.23	NT	0.19	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	ND<2.0	NT	ND<2.0	NT
Arsenic	10	10	NA	NT	NT	17	NT	6.2	NT
Barium	4,700	140,000	NA	NT	NT	85	NT	58	NT
Beryllium	2	2	NA	NT	NT	ND<1.0	NT	ND<1.0	NT
Cadmium	34	1,000	NA	NT	NT	1.5	NT	ND<0.50	NT
Chromium	100*	100*	NA	NT	NT	7.7	NT	ND<2.0	NT
Copper	2,500	76,000	NA	NT	NT	140	NT	5.0	NT
Lead	500	1,000	NA	NT	NT	170	NT	8.8	NT
Mercury	20	610	NA	NT	NT	0.73	NT	ND<0.20	NT
Nickel	1,400	7,500	NA	NT	NT	11	NT	ND<2.0	NT
Selenium	340	10,000	NA	NT	NT	ND<1.0	NT	ND<1.0	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-ZZZ	TB-ZZZ	TB-AAAA	TB-AAAA	TB-AAAA	TB-AAAA
Depth Below Grade (ft.)			GB Area	(10-12)	(15-16)	(0.0-0.3)	(0.3-1.3)	(2.5-3)	(4-6)
Sample Collection Date				4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	ND<2.0	NT	ND<2.0	NT
Thallium	5.4	160	NA	NT	NT	8.0	NT	ND<2.0	NT
Vanadium	470	14,000	NA	NT	NT	41	NT	13	NT
Zinc	20,000	610,000	NA	NT	NT	75	NT	2.1	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	ND<50	140	ND<50	NT	ND<50

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.


Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-AAAA	TB-BBBB	TB-BBBB	TB-BBBB	TB-BBBB
Depth Below Grade (ft.)					(15-17)	(0.0-0.3)	(0.3-1.3)	(2.3-4.3)	(4.3-6.3)
Sample Collection Date					4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	ND<0.20	NT	ND<0.20	NT	NT	NT
Acenaphthylene	1,000	2,500	84	ND<0.20	NT	ND<0.20	NT	NT	NT
Anthracene	1,000	2,500	400	0.32	NT	0.41	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	0.61	NT	4.8	NT	NT	NT
Benzo[a]pyrene	1	1	1	0.70	NT	6.7	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	0.85	NT	7.9	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	0.30	NT	3.7	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	0.37	NT	2.7	NT	NT	NT
Chrysene	84	780	1	0.50	NT	4.7	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	ND<0.20	NT	0.79	NT	NT	NT
Fluoranthene	1,000	2,500	56	1.6	NT	9.8	NT	NT	NT
Fluorene	1,000	2,500	56	ND<0.20	NT	ND<0.20	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	0.33	NT	4.1	NT	NT	NT
Naphthalene	1,000	2,500	56	ND<0.20	NT	0.24	NT	NT	NT
Phenanthrene	1,000	2,500	40	1.3	NT	0.74	NT	NT	NT
Pyrene	1,000	2,500	40	1.4	NT	11	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	ND<0.25	ND<0.25	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	ND<0.25	ND<0.25	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	ND<0.25	ND<0.25	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	ND<0.25	ND<0.25	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	ND<0.25	ND<0.25	NT	NT
Tetrachloroethene	12	110	1	NT	NT	ND<0.25	ND<0.25	NT	NT
Toluene	500	1,000	67	NT	NT	ND<0.25	ND<0.25	NT	NT
Trichloroethene	56	520	1.0	NT	NT	ND<0.25	ND<0.25	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	ND<0.25	ND<0.25	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.25	ND<0.25	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.25	ND<0.25	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	ND<0.25	ND<0.25	NT	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-AAAA	TB-BBBB	TB-BBBB	TB-BBBB	TB-BBBB
Depth Below Grade (ft.)					(15-17)	(0.0-0.3)	(0.3-1.3)	(2.3-4.3)	(4.3-6.3)
Sample Collection Date					4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA		NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06		NT	NT	ND<0.006	ND<0.006	NT
Arsenic	NA	NA	0.5		NT	NT	ND<0.05	ND<0.05	NT
Barium	NA	NA	10		NT	NT	0.19	0.53	NT
Copper	NA	NA	13		NT	NT	ND<0.04	ND<0.04	NT
Lead	NA	NA	0.15		NT	NT	ND<0.013	ND<0.013	NT
Mercury	NA	NA	0.02		NT	NT	ND<0.002	ND<0.002	NT
Nickel	NA	NA	1.0		NT	NT	ND<0.05	ND<0.05	NT
Selenium	NA	NA	0.50		NT	NT	ND<0.01	ND<0.01	NT
Thallium	NA	NA	0.05		NT	NT	ND<0.005	ND<0.005	NT
Vanadium	NA	NA	0.50		NT	NT	ND<0.05	ND<0.05	NT
Zinc	NA	NA	50		NT	NT	0.11	0.34	NT
Total Metals									
Antimony	27	8,200	NA		NT	NT	ND<2.0	ND<2.0	NT
Arsenic	10	10	NA		NT	NT	27	18	NT
Barium	4,700	140,000	NA		NT	NT	51	53	NT
Beryllium	2	2	NA		NT	NT	ND<1.0	ND<1.0	NT
Cadmium	34	1,000	NA		NT	NT	2.2	1.7	NT
Chromium	100*	100*	NA		NT	NT	10	8.6	NT
Copper	2,500	76,000	NA		NT	NT	67	39	NT
Lead	500	1,000	NA		NT	NT	64	56	NT
Mercury	20	610	NA		NT	NT	0.29	ND<0.20	NT
Nickel	1,400	7,500	NA		NT	NT	16	7.6	NT
Selenium	340	10,000	NA		NT	NT	ND<1.0	1.2	NT

Ta C-12.2
**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB Area	TB-AAAA (15-17)	TB-BBBB (0.0-0.3)	TB-BBBB (0.3-1.3)	TB-BBBB (2.3-4.3)	TB-BBBB (4.3-6.3)	TB-BBBB (10-12)
Depth Below Grade (ft.)									
Sample Collection Date				4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	ND<2.0	ND<2.0	NT	NT
Thallium	5.4	160	NA	NT	NT	11	10	NT	NT
Vanadium	470	14,000	NA	NT	NT	40	18	NT	NT
Zinc	20,000	610,000	NA	NT	NT	95	25	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	100	140	140	93

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- * = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB Area	TB-BBBB	TB-CCCC	TB-CCCC	TB-CCCC	TB-CCCC	TB-CCCC
Depth Below Grade (ft.)				(15-17)	(0.0-0.3)	(2.5-2.8)	(2.8-3.8)	(4.5-6)	(6-6.5)
Sample Collection Date				4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	NT	ND<0.20	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	NT	ND<0.20	NT
Anthracene	1,000	2,500	400	NT	NT	NT	NT	ND<0.20	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	NT	0.22	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	NT	ND<0.20	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	NT	0.50	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	NT	ND<0.20	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	NT	ND<0.20	NT
Chrysene	84	780	1	NT	NT	NT	NT	0.91	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	NT	ND<0.20	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	NT	0.30	NT
Fluorene	1,000	2,500	56	NT	NT	NT	NT	ND<0.20	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	NT	ND<0.20	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	ND<0.20	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	NT	1.0	NT
Pyrene	1,000	2,500	40	NT	NT	NT	NT	0.38	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	0.039	NT	ND<0.25	NT	NT
Isopropylbenzene	500	1,000	132	NT	ND<0.005	NT	ND<0.25	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	ND<0.005	NT	ND<0.25	NT	NT
Naphthalene	1,000	2,500	56	NT	ND<0.005	NT	ND<0.25	NT	NT
n-Propylbenzene	500	1,000	14	NT	ND<0.005	NT	ND<0.25	NT	NT
Tetrachloroethene	12	110	1	NT	ND<0.005	NT	ND<0.25	NT	NT
Toluene	500	1,000	67	NT	0.15	NT	ND<0.25	NT	NT
Trichloroethene	56	520	1.0	NT	ND<0.005	NT	ND<0.25	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	ND<0.005	NT	ND<0.25	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	ND<0.005	NT	ND<0.25	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	ND<0.005	NT	ND<0.25	NT	NT
Xylenes (total)	500	1,000	19.5	NT	0.18	NT	ND<0.25	NT	NT

Table AOC-12.2

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-BBBB (15-17) 4/3/2002	TB-CCCC (0.0-0.3) 4/3/2002	TB-CCCC (2.5-2.8) 4/3/2002	TB-CCCC (2.8-3.8) 4/3/2002	TB-CCCC (4.5-6) 4/3/2002
Depth Below Grade (ft.)									
Sample Collection Date									
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NT
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NT
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NT
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NT
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	NT	NT	ND<0.006	NT	ND<0.006
Arsenic	NA	NA	0.5	NT	NT	NT	ND<0.05	NT	ND<0.05
Barium	NA	NA	10	NT	NT	NT	0.32	NT	0.50
Copper	NA	NA	13	NT	NT	NT	ND<0.04	NT	ND<0.04
Lead	NA	NA	0.15	NT	NT	NT	ND<0.013	NT	ND<0.013
Mercury	NA	NA	0.02	NT	NT	NT	ND<0.002	NT	ND<0.002
Nickel	NA	NA	1.0	NT	NT	NT	ND<0.05	NT	ND<0.05
Selenium	NA	NA	0.50	NT	NT	NT	ND<0.01	NT	ND<0.01
Thallium	NA	NA	0.05	NT	NT	NT	ND<0.005	NT	ND<0.005
Vanadium	NA	NA	0.50	NT	NT	NT	ND<0.05	NT	ND<0.05
Zinc	NA	NA	50	NT	NT	NT	0.32	NT	0.24
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	ND<2.0	NT	2.7
Arsenic	10	10	NA	NT	NT	NT	7.4	NT	160
Barium	4,700	140,000	NA	NT	NT	NT	58	NT	22
Beryllium	2	2	NA	NT	NT	NT	ND<1.0	NT	ND<1.0
Cadmium	34	1,000	NA	NT	NT	NT	ND<0.50	NT	6.7
Chromium	100*	100*	NA	NT	NT	NT	ND<2.0	NT	5.3
Copper	2,500	76,000	NA	NT	NT	NT	6.5	NT	38
Lead	500	1,000	NA	NT	NT	NT	5.4	NT	190
Mercury	20	610	NA	NT	NT	NT	ND<0.20	NT	0.51
Nickel	1,400	7,500	NA	NT	NT	NT	ND<2.0	NT	2.2
Selenium	340	10,000	NA	NT	NT	NT	2.2	NT	ND<1.0

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Table AOC-12.2

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-BBBB	TB-CCCC	TB-CCCC	TB-CCCC	TB-CCCC	TB-CCCC
Depth Below Grade (ft.)			GB Area	(15-17)	(0.0-0.3)	(2.5-2.8)	(2.8-3.8)	(4.5-6)	(6-6.5)
Sample Collection Date				4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	ND<2.0	NT	ND<2.0
Thallium	5.4	160	NA	NT	NT	NT	ND<2.0	NT	43
Vanadium	470	14,000	NA	NT	NT	NT	3.8	NT	15
Zinc	20,000	610,000	NA	NT	NT	NT	4.3	NT	ND<2.0
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	670	NT	ND<50	ND<50	110	NT

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

(1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.

(2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.

(3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.

(4) = Submitted as a Quality Control (QC) duplicate sample.

☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB Area	TB-CCCC (10-12)	TB-CCCC (15-17)	TB-DDDD (0.0-0.3)	TB-DDDD (1.3-1.6)	TB-DDDD (1.6-2.6)	TB-DDDD (3.3-4.3)
Depth Below Grade (ft.)				4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
Sample Collection Date									
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	NT	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	NT	NT	NT
Anthracene	1,000	2,500	400	NT	NT	NT	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	NT	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	NT	NT	NT
Chrysene	84	780	1	NT	NT	NT	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	NT	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Fluorene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	NT	NT	NT
Pyrene	1,000	2,500	40	NT	NT	NT	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	NT	NT
Tetrachloroethene	12	110	1	NT	NT	NT	NT	NT	NT
Toluene	500	1,000	67	NT	NT	NT	NT	NT	NT
Trichloroethene	56	520	1.0	NT	NT	NT	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	NT	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/Commercial		GB Area	TB-CCCC	TB-CCCC	TB-DDDD	TB-DDDD	TB-DDDD
Depth Below Grade (ft.)					(10-12)	(15-17)	(0.0-0.3)	(1.3-1.6)	(1.6-2.6)
Sample Collection Date					4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA		ND<0.50	NT	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA		ND<0.50	NT	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA		ND<0.50	NT	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA		ND<0.50	NT	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA		NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06		NT	NT	NT	NT	NT
Arsenic	NA	NA	0.5		NT	NT	NT	NT	NT
Barium	NA	NA	10		NT	NT	NT	NT	NT
Copper	NA	NA	13		NT	NT	NT	NT	NT
Lead	NA	NA	0.15		NT	NT	NT	NT	NT
Mercury	NA	NA	0.02		NT	NT	NT	NT	NT
Nickel	NA	NA	1.0		NT	NT	NT	NT	NT
Selenium	NA	NA	0.50		NT	NT	NT	NT	NT
Thallium	NA	NA	0.05		NT	NT	NT	NT	NT
Vanadium	NA	NA	0.50		NT	NT	NT	NT	NT
Zinc	NA	NA	50		NT	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA		NT	NT	NT	NT	NT
Arsenic	10	10	NA		NT	NT	NT	NT	NT
Barium	4,700	140,000	NA		NT	NT	NT	NT	NT
Beryllium	2	2	NA		NT	NT	NT	NT	NT
Cadmium	34	1,000	NA		NT	NT	NT	NT	NT
Chromium	100*	100*	NA		NT	NT	NT	NT	NT
Copper	2,500	76,000	NA		NT	NT	NT	NT	NT
Lead	500	1,000	NA		NT	NT	NT	NT	NT
Mercury	20	610	NA		NT	NT	NT	NT	NT
Nickel	1,400	7,500	NA		NT	NT	NT	NT	NT
Selenium	340	10,000	NA		NT	NT	NT	NT	NT

Table AOC-12.2

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB Area	TB-CCCC (10-12)	TB-CCCC (15-17)	TB-DDDD (0.0-0.3)	TB-DDDD (1.3-1.6)	TB-DDDD (1.6-2.6)	TB-DDDD (3.3-4.3)
Depth Below Grade (ft.)									
Sample Collection Date				4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002	4/3/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	NT	NT	NT
Thallium	5.4	160	NA	NT	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	ND<50	ND<50	NT	NT	NT	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-DDDD	TB-EEEE	TB-EEEE	TB-EEEE	TB-EEEE	TB-EEEE
Depth Below Grade (ft.)			GB Area	(15-17)	(0.0-0.3)	(1.5-1.8)	(1.8-2.8)	(3.8-5.8)	(10-12)
Sample Collection Date				4/3/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	NT	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	NT	NT	NT
Anthracene	1,000	2,500	400	NT	NT	NT	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	NT	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	NT	NT	NT
Chrysene	84	780	1	NT	NT	NT	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	NT	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Fluorene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	NT	NT	NT
Pyrene	1,000	2,500	40	NT	NT	NT	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	ND<0.005	NT	NT	NT	ND<0.25
Isopropylbenzene	500	1,000	132	NT	ND<0.005	NT	NT	NT	ND<0.25
4-Isopropyltoluene	500	1,000	41.8	NT	ND<0.005	NT	NT	NT	ND<0.25
Naphthalene	1,000	2,500	56	NT	ND<0.005	NT	NT	NT	ND<0.25
n-Propylbenzene	500	1,000	14	NT	ND<0.005	NT	NT	NT	ND<0.25
Tetrachloroethene	12	110	1	NT	ND<0.005	NT	NT	NT	ND<0.25
Toluene	500	1,000	67	NT	ND<0.005	NT	NT	NT	ND<0.25
Trichloroethene	56	520	1.0	NT	ND<0.005	NT	NT	NT	ND<0.25
1,1,1-Trichloroethane	500	1,000	40	NT	ND<0.005	NT	NT	NT	ND<0.25
1,2,4-Trimethylbenzene	500	1,000	70	NT	ND<0.005	NT	NT	NT	ND<0.25
1,3,5-Trimethylbenzene	500	1,000	70	NT	ND<0.005	NT	NT	NT	ND<0.25
Xylenes (total)	500	1,000	19.5	NT	ND<0.005	NT	NT	NT	ND<0.25

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-DDDD (15-17)	TB-EEEE (0.0-0.3)	TB-EEEE (1.5-1.8)	TB-EEEE (1.8-2.8)	TB-EEEE (3.8-5.8)
Depth Below Grade (ft.)				(15-17)	(0.0-0.3)	(1.5-1.8)	(1.8-2.8)	(3.8-5.8)	(10-12)
Sample Collection Date				4/3/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	NT	NT	ND<0.006	ND<0.006	NT
Arsenic	NA	NA	0.5	NT	NT	NT	ND<0.05	ND<0.05	NT
Barium	NA	NA	10	NT	NT	NT	0.38	0.17	NT
Copper	NA	NA	13	NT	NT	NT	ND<0.04	ND<0.04	NT
Lead	NA	NA	0.15	NT	NT	NT	ND<0.013	ND<0.013	NT
Mercury	NA	NA	0.02	NT	NT	NT	ND<0.002	ND<0.002	NT
Nickel	NA	NA	1.0	NT	NT	NT	ND<0.05	ND<0.05	NT
Selenium	NA	NA	0.50	NT	NT	NT	ND<0.01	ND<0.01	NT
Thallium	NA	NA	0.05	NT	NT	NT	ND<0.005	ND<0.005	NT
Vanadium	NA	NA	0.50	NT	NT	NT	2.2	ND<0.05	NT
Zinc	NA	NA	50	NT	NT	NT	0.13	0.21	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	ND<2.0	ND<2.0	NT
Arsenic	10	10	NA	NT	NT	NT	6.7	1.9	NT
Barium	4,700	140,000	NA	NT	NT	NT	90	28	NT
Beryllium	2	2	NA	NT	NT	NT	ND<1.0	ND<1.0	NT
Cadmium	34	1,000	NA	NT	NT	NT	ND<0.50	2.4	NT
Chromium	100*	100*	NA	NT	NT	NT	ND<2.0	11	NT
Copper	2,500	76,000	NA	NT	NT	NT	8.2	84	NT
Lead	500	1,000	NA	NT	NT	NT	8.4	59	NT
Mercury	20	610	NA	NT	NT	NT	ND<0.20	0.45	NT
Nickel	1,400	7,500	NA	NT	NT	NT	6.2	19	NT
Selenium	340	10,000	NA	NT	NT	NT	2.1	ND<1.0	NT


Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-DDDD	TB-EEEE	TB-EEEE	TB-EEEE	TB-EEEE	TB-EEEE
Depth Below Grade (ft.)			GB Area	(15-17)	(0.0-0.3)	(1.5-1.8)	(1.8-2.8)	(3.8-5.8)	(10-12)
Sample Collection Date				4/3/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	ND<2.0	ND<2.0	NT
Thallium	5.4	160	NA	NT	NT	NT	ND<2.0	11	NT
Vanadium	470	14,000	NA	NT	NT	NT	240	25	NT
Zinc	20,000	610,000	NA	NT	NT	NT	2.6	230	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	ND<50	ND<50	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-EEEE	TB-FFFF	TB-FFFF	TB-FFFF	TB-GGGG
Depth Below Grade (ft.)				(20-22)	(0.0-0.3)	(0.5-0.8)	(2.5-3.5)	(3.5-4.5)	(0.0-0.3)
Sample Collection Date				4/2/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	ND<0.20	NT	NT	ND<0.20	ND<0.20	NT
Acenaphthylene	1,000	2,500	84	ND<0.20	NT	NT	ND<0.20	ND<0.20	NT
Anthracene	1,000	2,500	400	ND<0.20	NT	NT	ND<0.20	ND<0.20	NT
Benzo[a]anthracene	1	7.8	1	ND<0.20	NT	NT	ND<0.20	0.34	NT
Benzo[a]pyrene	1	1	1	ND<0.20	NT	NT	ND<0.20	0.39	NT
Benzo[b]fluoranthene	1	7.8	1	ND<0.20	NT	NT	ND<0.20	0.62	NT
Benzo[g,h,i]perylene	1,000	2,500	42	ND<0.20	NT	NT	ND<0.20	ND<0.20	NT
Benzo[k]fluoranthene	8.4	78	1	ND<0.20	NT	NT	ND<0.20	0.27	NT
Chrysene	84	780	1	ND<0.20	NT	NT	ND<0.20	0.38	NT
Dibenz[a,h]anthracene	1	1	1	ND<0.20	NT	NT	ND<0.20	ND<0.20	NT
Fluoranthene	1,000	2,500	56	ND<0.20	NT	NT	ND<0.20	0.45	NT
Fluorene	1,000	2,500	56	ND<0.20	NT	NT	ND<0.20	ND<0.20	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	ND<0.20	NT	NT	ND<0.20	0.20	NT
Naphthalene	1,000	2,500	56	ND<0.20	NT	NT	ND<0.20	ND<0.20	NT
Phenanthrene	1,000	2,500	40	ND<0.20	NT	NT	ND<0.20	ND<0.20	NT
Pyrene	1,000	2,500	40	ND<0.20	NT	NT	ND<0.20	0.47	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	ND<0.005	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	ND<0.005	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	ND<0.005	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	ND<0.005	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	ND<0.005	NT
Tetrachloroethene	12	110	1	NT	NT	NT	NT	ND<0.005	NT
Toluene	500	1,000	67	NT	NT	NT	NT	ND<0.005	NT
Trichloroethene	56	520	1.0	NT	NT	NT	NT	ND<0.005	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	ND<0.005	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	ND<0.005	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	ND<0.005	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	ND<0.005	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-EEEE	TB-FFFF	TB-FFFF	TB-FFFF	TB-GGGG
Depth Below Grade (ft.)					(20-22)	(0.0-0.3)	(0.5-0.8)	(2.5-3.5)	(3.5-4.5)
Sample Collection Date					4/2/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	NT	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	NT	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	NT	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	NT	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	NT	NT	ND<0.006	ND<0.006	NT
Arsenic	NA	NA	0.5	NT	NT	NT	ND<0.05	ND<0.05	NT
Barium	NA	NA	10	NT	NT	NT	0.15	0.16	NT
Copper	NA	NA	13	NT	NT	NT	ND<0.04	ND<0.04	NT
Lead	NA	NA	0.15	NT	NT	NT	ND<0.013	ND<0.013	NT
Mercury	NA	NA	0.02	NT	NT	NT	ND<0.002	ND<0.002	NT
Nickel	NA	NA	1.0	NT	NT	NT	ND<0.05	ND<0.05	NT
Selenium	NA	NA	0.50	NT	NT	NT	ND<0.01	ND<0.01	NT
Thallium	NA	NA	0.05	NT	NT	NT	ND<0.005	ND<0.005	NT
Vanadium	NA	NA	0.50	NT	NT	NT	ND<0.05	ND<0.05	NT
Zinc	NA	NA	50	NT	NT	NT	0.13	0.14	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	ND<2.0	2.8	NT
Arsenic	10	10	NA	NT	NT	NT	6.2	7.9	NT
Barium	4,700	140,000	NA	NT	NT	NT	51	89	NT
Beryllium	2	2	NA	NT	NT	NT	ND<1.0	ND<1.0	NT
Cadmium	34	1,000	NA	NT	NT	NT	2.0	1.6	NT
Chromium	100*	100*	NA	NT	NT	NT	7.5	9.3	NT
Copper	2,500	76,000	NA	NT	NT	NT	53	210	NT
Lead	500	1,000	NA	NT	NT	NT	56	590	NT
Mercury	20	610	NA	NT	NT	NT	0.42	1.1	NT
Nickel	1,400	7,500	NA	NT	NT	NT	13	8.5	NT
Selenium	340	10,000	NA	NT	NT	NT	1.1	ND<1.0	NT

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Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-EEEE	TB-FFFF	TB-FFFF	TB-FFFF	TB-FFFF	TB-GGGG
Depth Below Grade (ft.)			GB Area	(20-22)	(0.0-0.3)	(0.5-0.8)	(2.5-3.5)	(3.5-4.5)	(0.0-0.3)
Sample Collection Date				4/2/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	ND<2.0	ND<2.0	NT
Thallium	5.4	160	NA	NT	NT	NT	11	8.3	NT
Vanadium	470	14,000	NA	NT	NT	NT	17	26	NT
Zinc	20,000	610,000	NA	NT	NT	NT	39	130	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	680	ND<50	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-GGGG	TB-GGGG	TB-HHHH	TB-HHHH	TB-HHHH
Depth Below Grade (ft.)					(1-2)	(2.3-4.3)	(0.0-0.3)	(1.3-2.3)	(2.3-4.3)
Sample Collection Date					4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	ND<0.20	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	ND<0.20	NT	NT
Anthracene	1,000	2,500	400	NT	NT	NT	ND<0.20	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	0.92	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	1.3	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	1.9	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	0.82	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	0.73	NT	NT
Chrysene	84	780	1	NT	NT	NT	1.1	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	ND<0.20	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	1.6	NT	NT
Fluorene	1,000	2,500	56	NT	NT	NT	ND<0.20	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	0.76	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	ND<0.20	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	0.90	NT	NT
Pyrene	1,000	2,500	40	NT	NT	NT	1.4	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	NT	ND<0.25	ND<0.25	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	ND<0.25	ND<0.25	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	ND<0.25	ND<0.25	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	ND<0.25	ND<0.25	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	ND<0.25	ND<0.25	NT
Tetrachloroethene	12	110	1	NT	NT	NT	ND<0.25	ND<0.25	NT
Toluene	500	1,000	67	NT	NT	NT	ND<0.25	ND<0.25	NT
Trichloroethene	56	520	1.0	NT	NT	NT	ND<0.25	ND<0.25	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	ND<0.25	ND<0.25	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.25	ND<0.25	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.25	ND<0.25	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	ND<0.25	ND<0.25	NT


Table AUC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-GGGG	TB-GGGG	TB-HHHH	TB-HHHH	TB-HHHH
Depth Below Grade (ft.)				(1-2)	(2.3-4.3)	(0.0-0.3)	(1.3-2.3)	(2.3-4.3)	(5-6)
Sample Collection Date				4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	NT	NT	ND<0.006	NT	NT
Arsenic	NA	NA	0.5	NT	NT	NT	ND<0.05	NT	NT
Barium	NA	NA	10	NT	NT	NT	0.23	NT	NT
Copper	NA	NA	13	NT	NT	NT	ND<0.04	NT	NT
Lead	NA	NA	0.15	NT	NT	NT	ND<0.013	NT	NT
Mercury	NA	NA	0.02	NT	NT	NT	ND<0.002	NT	NT
Nickel	NA	NA	1.0	NT	NT	NT	ND<0.05	NT	NT
Selenium	NA	NA	0.50	NT	NT	NT	0.014	NT	NT
Thallium	NA	NA	0.05	NT	NT	NT	ND<0.005	NT	NT
Vanadium	NA	NA	0.50	NT	NT	NT	ND<0.05	NT	NT
Zinc	NA	NA	50	NT	NT	NT	0.25	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	2.3	NT	NT
Arsenic	10	10	NA	NT	NT	NT	140	NT	NT
Barium	4,700	140,000	NA	NT	NT	NT	51	NT	NT
Beryllium	2	2	NA	NT	NT	NT	ND<1.0	NT	NT
Cadmium	34	1,000	NA	NT	NT	NT	4.7	NT	NT
Chromium	100*	100*	NA	NT	NT	NT	9.0	NT	NT
Copper	2,500	76,000	NA	NT	NT	NT	54	NT	NT
Lead	500	1,000	NA	NT	NT	NT	160	NT	NT
Mercury	20	610	NA	NT	NT	NT	1.1	NT	NT
Nickel	1,400	7,500	NA	NT	NT	NT	6.7	NT	NT
Selenium	340	10,000	NA	NT	NT	NT	6.4	NT	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/Commercial		GB Area	TB-GGGG	TB-GGGG	TB-HHHH	TB-HHHH	TB-HHHH
Depth Below Grade (ft.)					(1-2)	(2.3-4.3)	(0.0-0.3)	(1.3-2.3)	(2.3-4.3)
Sample Collection Date					4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	NT	ND<2.0	NT
Thallium	5.4	160	NA	NT	NT	NT	NT	24	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	34	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	32	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	NT	ND<50	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-III	TB-III	TB-III	TB-JJJ	TB-JJJ
Depth Below Grade (ft.)					(0.0-0.3)	(0.3-1.3)	(4.3-6.3)	(0.0-0.3)	(1.5-1.8)
Sample Collection Date					4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	ND<0.20	NT	NT	NT	ND<0.20
Acenaphthylene	1,000	2,500	84	NT	ND<0.20	NT	NT	NT	ND<0.20
Anthracene	1,000	2,500	400	NT	ND<0.20	NT	NT	NT	ND<0.20
Benzo[a]anthracene	1	7.8	1	NT	1.0	NT	NT	NT	0.24
Benzo[a]pyrene	1	1	1	NT	1.3	NT	NT	NT	0.43
Benzo[b]fluoranthene	1	7.8	1	NT	2.0	NT	NT	NT	0.43
Benzo[g,h,i]perylene	1,000	2,500	42	NT	0.64	NT	NT	NT	ND<0.20
Benzo[k]fluoranthene	8.4	78	1	NT	0.80	NT	NT	NT	ND<0.20
Chrysene	84	780	1	NT	1.2	NT	NT	NT	0.81
Dibenz[a,h]anthracene	1	1	1	NT	ND<0.20	NT	NT	NT	ND<0.20
Fluoranthene	1,000	2,500	56	NT	1.6	NT	NT	NT	0.20
Fluorene	1,000	2,500	56	NT	ND<0.20	NT	NT	NT	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	0.64	NT	NT	NT	ND<0.20
Naphthalene	1,000	2,500	56	NT	ND<0.20	NT	NT	NT	ND<0.20
Phenanthrene	1,000	2,500	40	NT	0.73	NT	NT	NT	0.98
Pyrene	1,000	2,500	40	NT	1.5	NT	NT	NT	0.29
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	ND<0.25	NT	NT	NT	ND<0.25
Isopropylbenzene	500	1,000	132	NT	ND<0.25	NT	NT	NT	ND<0.25
4-Isopropyltoluene	500	1,000	41.8	NT	ND<0.25	NT	NT	NT	ND<0.25
Naphthalene	1,000	2,500	56	NT	ND<0.25	NT	NT	NT	ND<0.25
n-Propylbenzene	500	1,000	14	NT	ND<0.25	NT	NT	NT	ND<0.25
Tetrachloroethene	12	110	1	NT	0.60	NT	NT	NT	ND<0.25
Toluene	500	1,000	67	NT	ND<0.25	NT	NT	NT	ND<0.25
Trichloroethene	56	520	1.0	NT	ND<0.25	NT	NT	NT	ND<0.25
1,1,1-Trichloroethane	500	1,000	40	NT	0.63	NT	NT	NT	ND<0.25
1,2,4-Trimethylbenzene	500	1,000	70	NT	ND<0.25	NT	NT	NT	ND<0.25
1,3,5-Trimethylbenzene	500	1,000	70	NT	ND<0.25	NT	NT	NT	ND<0.25
Xylenes (total)	500	1,000	19.5	NT	ND<0.25	NT	NT	NT	ND<0.25

Tab C-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-III	TB-III	TB-III	TB-JJJ	TB-JJJ
Depth Below Grade (ft.)					(0.0-0.3)	(0.3-1.3)	(4.3-6.3)	(0.0-0.3)	(1.5-1.8)
Sample Collection Date					4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	1.9 ⁽²⁾	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	ND<0.006	NT	NT	NT	ND<0.006
Arsenic	NA	NA	0.5	NT	ND<0.05	NT	NT	NT	ND<0.05
Barium	NA	NA	10	NT	0.36	NT	NT	NT	0.37
Copper	NA	NA	13	NT	ND<0.04	NT	NT	NT	ND<0.04
Lead	NA	NA	0.15	NT	0.037	NT	NT	NT	ND<0.013
Mercury	NA	NA	0.02	NT	ND<0.002	NT	NT	NT	ND<0.002
Nickel	NA	NA	1.0	NT	0.052	NT	NT	NT	ND<0.05
Selenium	NA	NA	0.50	NT	ND<0.01	NT	NT	NT	ND<0.01
Thallium	NA	NA	0.05	NT	ND<0.005	NT	NT	NT	ND<0.005
Vanadium	NA	NA	0.50	NT	0.77	NT	NT	NT	ND<0.05
Zinc	NA	NA	50	NT	0.30	NT	NT	NT	0.25
Total Metals									
Antimony	27	8,200	NA	NT	ND<2.0	NT	NT	NT	ND<2.0
Arsenic	10	10	NA	NT	43	NT	NT	NT	6.3
Barium	4,700	140,000	NA	NT	58	NT	NT	NT	59
Beryllium	2	2	NA	NT	ND<1.0	NT	NT	NT	ND<1.0
Cadmium	34	1,000	NA	NT	1.7	NT	NT	NT	ND<0.50
Chromium	100*	100*	NA	NT	9.6	NT	NT	NT	ND<2.0
Copper	2,500	76,000	NA	NT	71	NT	NT	NT	5.1
Lead	500	1,000	NA	NT	110	NT	NT	NT	7.7
Mercury	20	610	NA	NT	0.39	NT	NT	NT	ND<0.20
Nickel	1,400	7,500	NA	NT	98	NT	NT	NT	ND<2.0
Selenium	340	10,000	NA	NT	ND<1.0	NT	NT	NT	2.3

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-III	TB-III	TB-III	TB-JJJJ	TB-JJJJ	TB-JJJJ
Depth Below Grade (ft.)			GB Area	(0.0-0.3)	(0.3-1.3)	(4.3-6.3)	(0.0-0.3)	(1.5-1.8)	(1.8-2.8)
Sample Collection Date				4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	ND<2.0	NT	NT	NT	ND<2.0
Thallium	5.4	160	NA	NT	8.9	NT	NT	NT	ND<2.0
Vanadium	470	14,000	NA	NT	520	NT	NT	NT	13
Zinc	20,000	610,000	NA	NT	59	NT	NT	NT	ND<2.0
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	ND<50	ND<50	ND<50	NT	NT	ND<50

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-JJJJ	TB-JJJJ	TB-KKKK	TB-KKKK	TB-KKKK ⁽⁴⁾
Depth Below Grade (ft.)					(3.5-5)	(5-5.5)	(0.0-0.3)	(1-1.3)	(1.3-2.3)
Sample Collection Date					4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	NT	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	NT	NT	NT
Anthracene	1,000	2,500	400	NT	NT	NT	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	NT	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	NT	NT	NT
Chrysene	84	780	1	NT	NT	NT	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	NT	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Fluorene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	NT	NT	NT
Pyrene	1,000	2,500	40	NT	NT	NT	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	NT	NT
Tetrachloroethene	12	110	1	NT	NT	NT	NT	NT	NT
Toluene	500	1,000	67	NT	NT	NT	NT	NT	NT
Trichloroethene	56	520	1.0	NT	NT	NT	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	NT	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-JJJJ	TB-JJJJ	TB-KKKK	TB-KKKK	TB-KKKK	TB-KKKK ⁽⁴⁾
Depth Below Grade (ft.)			GB Area	(3.5-5)	(5-5.5)	(0.0-0.3)	(1-1.3)	(1.3-2.3)	(5-6)
Sample Collection Date				4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	NT	NT	NT	NT	NT
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT	NT
Copper	NA	NA	13	NT	NT	NT	NT	NT	NT
Lead	NA	NA	0.15	NT	NT	NT	NT	NT	NT
Mercury	NA	NA	0.02	NT	NT	NT	NT	NT	NT
Nickel	NA	NA	1.0	NT	NT	NT	NT	NT	NT
Selenium	NA	NA	0.50	NT	NT	NT	NT	NT	NT
Thallium	NA	NA	0.05	NT	NT	NT	NT	NT	NT
Vanadium	NA	NA	0.50	NT	NT	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	3.7	NT	NT	NT	NT
Arsenic	10	10	NA	NT	300	NT	NT	NT	NT
Barium	4,700	140,000	NA	NT	37	NT	NT	NT	NT
Beryllium	2	2	NA	NT	ND<1.0	NT	NT	NT	NT
Cadmium	34	1,000	NA	NT	8.5	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	6.5	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	67	NT	NT	NT	NT
Lead	500	1,000	NA	NT	420	NT	NT	NT	NT
Mercury	20	610	NA	NT	ND<0.20	NT	NT	NT	NT
Nickel	1,400	7,500	NA	NT	2.5	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	15	NT	NT	NT	NT

Table AOC-12.2

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-JJJJ	TB-JJJJ	TB-KKKK	TB-KKKK	TB-KKKK	TB-KKKK ⁽⁴⁾
Depth Below Grade (ft.)			GB Area	(3.5-5)	(5-5.5)	(0.0-0.3)	(1-1.3)	(1.3-2.3)	(5-6)
Sample Collection Date				4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	ND<2.0	NT	NT	NT	NT
Thallium	5.4	160	NA	NT	38	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	12	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	11	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	NT	NT	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-KKKK	TB-LLLL	TB-LLLL	TB-LLLL	TB-LLLL
Depth Below Grade (ft.)					(5-6)	(0.0-0.3)	(0.3-0.6)	(0.6-1.6)	(3.3-4.3)
Sample Collection Date					4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	ND<0.20	0.50	0.44
Acenaphthylene	1,000	2,500	84	NT	NT	NT	ND<0.20	0.39	0.26
Anthracene	1,000	2,500	400	NT	NT	NT	ND<0.20	0.91	0.70
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	0.30	1.7	1.3
Benzo[a]pyrene	1	1	1	NT	NT	NT	0.24	2.4	1.8
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	0.37	2.8	2.5
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	0.35	1.0	0.88
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	ND<0.20	1.2	1.1
Chrysene	84	780	1	NT	NT	NT	0.48	1.9	1.6
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	ND<0.20	0.26	0.22
Fluoranthene	1,000	2,500	56	NT	NT	NT	0.27	4.0	3.2
Fluorene	1,000	2,500	56	NT	NT	NT	ND<0.20	0.61	0.51
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	0.28	1.1	1.0
Naphthalene	1,000	2,500	56	NT	NT	NT	ND<0.20	1.6	1.8
Phenanthrene	1,000	2,500	40	NT	NT	NT	0.71	3.5	2.6
Pyrene	1,000	2,500	40	NT	NT	NT	0.28	4.0	3.0
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	NT	ND<0.25	ND<0.005	ND<0.005
Isopropylbenzene	500	1,000	132	NT	NT	NT	ND<0.25	ND<0.005	ND<0.005
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	ND<0.25	ND<0.005	ND<0.005
Naphthalene	1,000	2,500	56	NT	NT	NT	ND<0.25	0.13	0.04
n-Propylbenzene	500	1,000	14	NT	NT	NT	ND<0.25	ND<0.005	ND<0.005
Tetrachloroethene	12	110	1	NT	NT	NT	ND<0.25	ND<0.005	ND<0.005
Toluene	500	1,000	67	NT	NT	NT	ND<0.25	ND<0.005	ND<0.005
Trichloroethene	56	520	1.0	NT	NT	NT	ND<0.25	ND<0.005	ND<0.005
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	ND<0.25	ND<0.005	ND<0.005
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.25	ND<0.005	ND<0.005
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.25	ND<0.005	ND<0.005
Xylenes (total)	500	1,000	19.5	NT	NT	NT	ND<0.25	ND<0.005	ND<0.005

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-KKKK	TB-LLLL	TB-LLLL	TB-LLLL	TB-LLLL
Depth Below Grade (ft.)					(5-6)	(0.0-0.3)	(0.3-0.6)	(0.6-1.6)	(3.3-4.3)
Sample Collection Date					4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA		NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06		NT	NT	NT	ND<0.006	0.024
Arsenic	NA	NA	0.5		NT	NT	NT	ND<0.05	ND<0.05
Barium	NA	NA	10		NT	NT	NT	0.37	0.29
Copper	NA	NA	13		NT	NT	NT	ND<0.04	ND<0.04
Lead	NA	NA	0.15		NT	NT	NT	0.018	ND<0.013
Mercury	NA	NA	0.02		NT	NT	NT	ND<0.002	ND<0.002
Nickel	NA	NA	1.0		NT	NT	NT	ND<0.05	ND<0.05
Selenium	NA	NA	0.50		NT	NT	NT	ND<0.01	ND<0.01
Thallium	NA	NA	0.05		NT	NT	NT	ND<0.005	ND<0.005
Vanadium	NA	NA	0.50		NT	NT	NT	0.22	ND<0.05
Zinc	NA	NA	50		NT	NT	NT	0.35	0.64
Total Metals									
Antimony	27	8,200	NA		NT	NT	NT	ND<2.0	2.6
Arsenic	10	10	NA		NT	NT	NT	19	9.3
Barium	4,700	140,000	NA		NT	NT	NT	53	78
Beryllium	2	2	NA		NT	NT	NT	ND<1.0	ND<1.0
Cadmium	34	1,000	NA		NT	NT	NT	1.4	3.0
Chromium	100*	100*	NA		NT	NT	NT	5.7	62
Copper	2,500	76,000	NA		NT	NT	NT	130	550
Lead	500	1,000	NA		NT	NT	NT	120	250
Mercury	20	610	NA		NT	NT	NT	0.29	4.4
Nickel	1,400	7,500	NA		NT	NT	NT	35	49
Selenium	340	10,000	NA		NT	NT	NT	1.4	ND<1.0

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-KKKK	TB-LLLL	TB-LLLL	TB-LLLL	TB-LLLL	TB-LLLL
Depth Below Grade (ft.)			GB Area	(5-6)	(0.0-0.3)	(0.3-0.6)	(0.6-1.6)	(3.3-4.3)	(4.3-6.3)
Sample Collection Date				4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	ND<2.0	2.7	NT
Thallium	5.4	160	NA	NT	NT	NT	7.2	6.0	NT
Vanadium	470	14,000	NA	NT	NT	NT	310	20	NT
Zinc	20,000	610,000	NA	NT	NT	NT	59	330	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	ND<50	520	280

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-MMMM	TB-MMMM	TB-MMMM	TB-MMMM	TB-NNNN	TB-NNNN
Depth Below Grade (ft.)			GB Area	(0.0-0.3)	(0.5-0.8)	(0.8-1.8)	(4.5-6.5)	(0.0-0.3)	(1-3)
Sample Collection Date				4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	NT	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	NT	NT	NT
Anthracene	1,000	2,500	400	NT	NT	NT	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	NT	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	NT	NT	NT
Chrysene	84	780	1	NT	NT	NT	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	NT	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Fluorene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	NT	NT	NT
Pyrene	1,000	2,500	40	NT	NT	NT	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	NT	NT
Tetrachloroethene	12	110	1	NT	NT	NT	NT	NT	NT
Toluene	500	1,000	67	NT	NT	NT	NT	NT	NT
Trichloroethene	56	520	1.0	NT	NT	NT	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	NT	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-MMMM	TB-MMMM	TB-MMMM	TB-MMMM	TB-NNNN
Depth Below Grade (ft.)					(0.0-0.3)	(0.5-0.8)	(0.8-1.8)	(4.5-6.5)	(0.0-0.3)
Sample Collection Date					4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	NT	NT	NT	NT	NT
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT	NT
Copper	NA	NA	13	NT	NT	NT	NT	NT	NT
Lead	NA	NA	0.15	NT	NT	NT	NT	NT	NT
Mercury	NA	NA	0.02	NT	NT	NT	NT	NT	NT
Nickel	NA	NA	1.0	NT	NT	NT	NT	NT	NT
Selenium	NA	NA	0.50	NT	NT	NT	NT	NT	NT
Thallium	NA	NA	0.05	NT	NT	NT	NT	NT	NT
Vanadium	NA	NA	0.50	NT	NT	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	NT	NT	NT
Arsenic	10	10	NA	NT	NT	NT	NT	NT	NT
Barium	4,700	140,000	NA	NT	NT	NT	NT	NT	NT
Beryllium	2	2	NA	NT	NT	NT	NT	NT	NT
Cadmium	34	1,000	NA	NT	NT	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	NT	NT	NT	NT
Lead	500	1,000	NA	NT	NT	NT	NT	NT	NT
Mercury	20	610	NA	NT	NT	NT	NT	NT	NT
Nickel	1,400	7,500	NA	NT	NT	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	NT	NT	NT	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-MMMM	TB-MMMM	TB-MMMM	TB-MMMM	TB-NNNN	TB-NNNN
Depth Below Grade (ft.)			GB Area	(0.0-0.3)	(0.5-0.8)	(0.8-1.8)	(4.5-6.5)	(0.0-0.3)	(1-3)
Sample Collection Date				4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	NT	NT	NT
Thallium	5.4	160	NA	NT	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	NT	NT	NT

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

(1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.

(2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.

(3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.

(4) = Submitted as a Quality Control (QC) duplicate sample.

☐ = Concentration exceeds associated criterion.


Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-NNNN	TB-NNNN	TB-OOOO	TB-OOOO	TB-OOOO	TB-PPPP
Depth Below Grade (ft.)			GB Area	(1.3-2.3)	(4-5)	(0.0-0.3)	(2.0-2.3)	(4-5)	(0.0-0.3)
Sample Collection Date				4/4/2002	4/4/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	ND<0.20	ND<0.20	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	ND<0.20	ND<0.20	NT
Anthracene	1,000	2,500	400	NT	NT	NT	ND<0.20	ND<0.20	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	0.58	ND<0.20	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	0.66	ND<0.20	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	0.97	ND<0.20	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	0.40	ND<0.20	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	0.64	ND<0.20	NT
Chrysene	84	780	1	NT	NT	NT	0.96	ND<0.20	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	ND<0.20	ND<0.20	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	0.97	ND<0.20	NT
Fluorene	1,000	2,500	56	NT	NT	NT	ND<0.20	ND<0.20	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	0.37	ND<0.20	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	0.23	ND<0.20	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	1.0	ND<0.20	NT
Pyrene	1,000	2,500	40	NT	NT	NT	0.92	ND<0.20	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	NT	ND<0.005	ND<0.005	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	ND<0.005	ND<0.005	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	ND<0.005	ND<0.005	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	ND<0.005	ND<0.005	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	ND<0.005	ND<0.005	NT
Tetrachloroethene	12	110	1	NT	NT	NT	ND<0.005	ND<0.005	NT
Toluene	500	1,000	67	NT	NT	NT	0.006	ND<0.005	NT
Trichloroethene	56	520	1.0	NT	NT	NT	ND<0.005	ND<0.005	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	ND<0.005	ND<0.005	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.005	ND<0.005	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.005	ND<0.005	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	ND<0.005	ND<0.005	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-NNNN	TB-NNNN	TB-OOOO	TB-OOOO	TB-PPPP
Depth Below Grade (ft.)					(1.3-2.3)	(4-5)	(0.0-0.3)	(2.0-2.3)	(4-5)
Sample Collection Date					4/4/2002	4/4/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA		NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06		NT	NT	NT	ND<0.006	ND<0.006
Arsenic	NA	NA	0.5		NT	NT	NT	ND<0.05	ND<0.05
Barium	NA	NA	10		NT	NT	NT	0.26	0.22
Copper	NA	NA	13		NT	NT	NT	ND<0.04	ND<0.04
Lead	NA	NA	0.15		NT	NT	NT	ND<0.013	ND<0.013
Mercury	NA	NA	0.02		NT	NT	NT	ND<0.002	ND<0.002
Nickel	NA	NA	1.0		NT	NT	NT	ND<0.05	ND<0.05
Selenium	NA	NA	0.50		NT	NT	NT	ND<0.01	ND<0.01
Thallium	NA	NA	0.05		NT	NT	NT	ND<0.005	ND<0.005
Vanadium	NA	NA	0.50		NT	NT	NT	ND<0.05	ND<0.05
Zinc	NA	NA	50		NT	NT	NT	0.15	0.20
Total Metals									
Antimony	27	8,200	NA		NT	NT	NT	ND<2.0	ND<2.0
Arsenic	10	10	NA		NT	NT	NT	15	75
Barium	4,700	140,000	NA		NT	NT	NT	63	71
Beryllium	2	2	NA		NT	NT	NT	ND<1.0	ND<1.0
Cadmium	34	1,000	NA		NT	NT	NT	1.2	13
Chromium	100*	100*	NA		NT	NT	NT	5.5	5.9
Copper	2,500	76,000	NA		NT	NT	NT	80	19
Lead	500	1,000	NA		NT	NT	NT	73	200
Mercury	20	610	NA		NT	NT	NT	2.6	0.43
Nickel	1,400	7,500	NA		NT	NT	NT	6.2	2.3
Selenium	340	10,000	NA		NT	NT	NT	ND<1.0	8.6

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-NNNN	TB-NNNN	TB-0000	TB-0000	TB-0000	TB-PPPP
Depth Below Grade (ft.)			GB Area	(1.3-2.3)	(4-5)	(0.0-0.3)	(2.0-2.3)	(4-5)	(0.0-0.3)
Sample Collection Date				4/4/2002	4/4/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	ND<2.0	ND<2.0	NT
Thallium	5.4	160	NA	NT	NT	NT	5.8	24	NT
Vanadium	470	14,000	NA	NT	NT	NT	38	10	NT
Zinc	20,000	610,000	NA	NT	NT	NT	47	ND<2.0	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	ND<50	ND<50	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- * = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table 12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-PPPP (0.3-0.6) 4/5/2002	TB-PPPP (0.9-1) 4/5/2002	TB-PPPP (2.3-4.3) 4/5/2002	TB-QQQQ (0.0-0.3) 4/5/2002	TB-QQQQ (0.3-2.3) 4/5/2002
Depth Below Grade (ft.)									
Sample Collection Date									
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	NT	ND<0.20	ND<0.20
Acenaphthylene	1,000	2,500	84	NT	NT	NT	NT	ND<0.20	ND<0.20
Anthracene	1,000	2,500	400	NT	NT	NT	NT	0.30	0.31
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	NT	1.8	1.6
Benzo[a]pyrene	1	1	1	NT	NT	NT	NT	2.2	2.2
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	NT	3.6	3.1
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	NT	0.97	0.71
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	NT	1.6	1.3
Chrysene	84	780	1	NT	NT	NT	NT	2.0	1.7
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	NT	0.29	ND<0.20
Fluoranthene	1,000	2,500	56	NT	NT	NT	NT	3.4	3.8
Fluorene	1,000	2,500	56	NT	NT	NT	NT	ND<0.20	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	NT	1.1	0.90
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	0.23	ND<0.20
Phenanthrene	1,000	2,500	40	NT	NT	NT	NT	1.5	2.0
Pyrene	1,000	2,500	40	NT	NT	NT	NT	2.9	3.6
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	ND<0.25	ND<0.25
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	ND<0.25	ND<0.25
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	ND<0.25	ND<0.25
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	ND<0.25	ND<0.25
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	ND<0.25	ND<0.25
Tetrachloroethene	12	110	1	NT	NT	NT	NT	ND<0.25	ND<0.25
Toluene	500	1,000	67	NT	NT	NT	NT	ND<0.25	ND<0.25
Trichloroethene	56	520	1.0	NT	NT	NT	NT	ND<0.25	ND<0.25
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	ND<0.25	ND<0.25
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	ND<0.25	ND<0.25
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	ND<0.25	ND<0.25
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	ND<0.25	ND<0.25

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Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-PPPP	TB-PPPP	TB-PPPP	TB-QQQQ	TB-QQQQ
Depth Below Grade (ft.)					(0.3-0.6)	(0.9-1)	(2.3-4.3)	(0.0-0.3)	(0.3-2.3)
Sample Collection Date					4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	NT	NT	NT	ND<0.006	ND<0.006
Arsenic	NA	NA	0.5	NT	NT	NT	NT	ND<0.05	ND<0.05
Barium	NA	NA	10	NT	NT	NT	NT	0.30	0.33
Copper	NA	NA	13	NT	NT	NT	NT	ND<0.04	0.052
Lead	NA	NA	0.15	NT	NT	NT	NT	ND<0.013	ND<0.013
Mercury	NA	NA	0.02	NT	NT	NT	NT	ND<0.002	ND<0.002
Nickel	NA	NA	1.0	NT	NT	NT	NT	ND<0.05	ND<0.05
Selenium	NA	NA	0.50	NT	NT	NT	NT	ND<0.01	ND<0.01
Thallium	NA	NA	0.05	NT	NT	NT	NT	ND<0.005	ND<0.005
Vanadium	NA	NA	0.50	NT	NT	NT	NT	ND<0.05	ND<0.05
Zinc	NA	NA	50	NT	NT	NT	NT	0.26	0.21
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	NT	2.2	ND<2.0
Arsenic	10	10	NA	NT	NT	NT	NT	26	13
Barium	4,700	140,000	NA	NT	NT	NT	NT	99	51
Beryllium	2	2	NA	NT	NT	NT	NT	ND<1.0	ND<1.0
Cadmium	34	1,000	NA	NT	NT	NT	NT	15	1.9
Chromium	100*	100*	NA	NT	NT	NT	NT	21	11
Copper	2,500	76,000	NA	NT	NT	NT	NT	170	150
Lead	500	1,000	NA	NT	NT	NT	NT	170	88
Mercury	20	610	NA	NT	NT	NT	NT	0.48	0.38
Nickel	1,400	7,500	NA	NT	NT	NT	NT	8.8	11
Selenium	340	10,000	NA	NT	NT	NT	NT	1.4	ND<1.0

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Table AUC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-PPPP	TB-PPPP	TB-PPPP	TB-QQQQ	TB-QQQQ
Depth Below Grade (ft.)					(0.3-0.6)	(0.9-1)	(2.3-4.3)	(0.0-0.3)	(0.3-2.3)
Sample Collection Date					4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	NT	ND<2.0	ND<2.0
Thallium	5.4	160	NA	NT	NT	NT	NT	14	6.5
Vanadium	470	14,000	NA	NT	NT	NT	NT	25	22
Zinc	20,000	610,000	NA	NT	NT	NT	NT	290	76
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	NT	ND<50	100

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- * = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-RRRR	TB-RRRR	TB-RRRR	TB-RRRR	TB-SSSS	TB-SSSS
Depth Below Grade (ft.)			GB Area	(0.0-0.3)	(1-1.3)	(3.3-3.9)	(3.9-4)	(0.0-0.3)	(2.2-2.5)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	NT	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	NT	NT	NT
Anthracene	1,000	2,500	400	NT	NT	NT	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	NT	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	NT	NT	NT
Chrysene	84	780	1	NT	NT	NT	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	NT	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Fluorene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	NT	NT	NT
Pyrene	1,000	2,500	40	NT	NT	NT	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	NT	NT
Tetrachloroethene	12	110	1	NT	NT	NT	NT	NT	NT
Toluene	500	1,000	67	NT	NT	NT	NT	NT	NT
Trichloroethene	56	520	1.0	NT	NT	NT	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	NT	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-RRRR	TB-RRRR	TB-RRRR	TB-RRRR	TB-SSSS
Depth Below Grade (ft.)					(0.0-0.3)	(1-1.3)	(3.3-3.9)	(3.9-4)	(0.0-0.3)
Sample Collection Date					4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA		NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06		NT	NT	NT	NT	NT
Arsenic	NA	NA	0.5		NT	NT	NT	NT	NT
Barium	NA	NA	10		NT	NT	NT	NT	NT
Copper	NA	NA	13		NT	NT	NT	NT	NT
Lead	NA	NA	0.15		NT	NT	NT	NT	NT
Mercury	NA	NA	0.02		NT	NT	NT	NT	NT
Nickel	NA	NA	1.0		NT	NT	NT	NT	NT
Selenium	NA	NA	0.50		NT	NT	NT	NT	NT
Thallium	NA	NA	0.05		NT	NT	NT	NT	NT
Vanadium	NA	NA	0.50		NT	NT	NT	NT	NT
Zinc	NA	NA	50		NT	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA		NT	NT	NT	NT	NT
Arsenic	10	10	NA		NT	NT	NT	NT	NT
Barium	4,700	140,000	NA		NT	NT	NT	NT	NT
Beryllium	2	2	NA		NT	NT	NT	NT	NT
Cadmium	34	1,000	NA		NT	NT	NT	NT	NT
Chromium	100*	100*	NA		NT	NT	NT	NT	NT
Copper	2,500	76,000	NA		NT	NT	NT	NT	NT
Lead	500	1,000	NA		NT	NT	NT	NT	NT
Mercury	20	610	NA		NT	NT	NT	NT	NT
Nickel	1,400	7,500	NA		NT	NT	NT	NT	NT
Selenium	340	10,000	NA		NT	NT	NT	NT	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-RRRR	TB-RRRR	TB-RRRR	TB-RRRR	TB-SSSS
Depth Below Grade (ft.)					(0.0-0.3)	(1-1.3)	(3.3-3.9)	(3.9-4)	(0.0-0.3)
Sample Collection Date					4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	NT	NT	NT
Thallium	5.4	160	NA	NT	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	NT	NT	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-SSSS	TB-TTTT	TB-TTTT	TB-TTTT	TB-UUUU
Depth Below Grade (ft.)					(2.5-4.5)	(0.0-0.3)	(1-1.3)	(2.3-4.3)	(0.0-0.3)
Sample Collection Date					4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	ND<0.20	NT	NT	ND<0.20	NT	ND<0.20
Acenaphthylene	1,000	2,500	84	ND<0.20	NT	NT	ND<0.20	NT	0.32
Anthracene	1,000	2,500	400	ND<0.20	NT	NT	0.22	NT	0.53
Benzo[a]anthracene	1	7.8	1	ND<0.20	NT	NT	0.51	NT	2.3
Benzo[a]pyrene	1	1	1	0.36	NT	NT	0.74	NT	2.4
Benzo[b]fluoranthene	1	7.8	1	0.47	NT	NT	1.1	NT	3.9
Benzo[g,h,i]perylene	1,000	2,500	42	ND<0.20	NT	NT	0.26	NT	0.71
Benzo[k]fluoranthene	8.4	78	1	ND<0.20	NT	NT	0.46	NT	1.6
Chrysene	84	780	1	0.69	NT	NT	0.55	NT	2.5
Dibenz[a,h]anthracene	1	1	1	ND<0.20	NT	NT	ND<0.20	NT	0.27
Fluoranthene	1,000	2,500	56	ND<0.20	NT	NT	1.3	NT	4.2
Fluorene	1,000	2,500	56	ND<0.20	NT	NT	ND<0.20	NT	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	ND<0.20	NT	NT	0.28	NT	0.99
Naphthalene	1,000	2,500	56	0.24	NT	NT	0.22	NT	ND<0.20
Phenanthrene	1,000	2,500	40	0.77	NT	NT	0.52	NT	2.2
Pyrene	1,000	2,500	40	ND<0.20	NT	NT	1.4	NT	3.9
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	ND<0.25	NT	NT	ND<0.25	NT	ND<0.25
Isopropylbenzene	500	1,000	132	ND<0.25	NT	NT	ND<0.25	NT	ND<0.25
4-Isopropyltoluene	500	1,000	41.8	ND<0.25	NT	NT	ND<0.25	NT	ND<0.25
Naphthalene	1,000	2,500	56	ND<0.25	NT	NT	ND<0.25	NT	ND<0.25
n-Propylbenzene	500	1,000	14	ND<0.25	NT	NT	ND<0.25	NT	ND<0.25
Tetrachloroethene	12	110	1	ND<0.25	NT	NT	ND<0.25	NT	ND<0.25
Toluene	500	1,000	67	ND<0.25	NT	NT	ND<0.25	NT	ND<0.25
Trichloroethene	56	520	1.0	ND<0.25	NT	NT	ND<0.25	NT	ND<0.25
1,1,1-Trichloroethane	500	1,000	40	ND<0.25	NT	NT	ND<0.25	NT	ND<0.25
1,2,4-Trimethylbenzene	500	1,000	70	ND<0.25	NT	NT	ND<0.25	NT	ND<0.25
1,3,5-Trimethylbenzene	500	1,000	70	ND<0.25	NT	NT	ND<0.25	NT	ND<0.25
Xylenes (total)	500	1,000	19.5	ND<0.25	NT	NT	ND<0.25	NT	ND<0.25

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB Area	TB-SSSS	TB-TTTT	TB-TTTT	TB-TTTT	TB-UUUU	TB-UUUU
Depth Below Grade (ft.)				(2.5-4.5)	(0.0-0.3)	(1-1.3)	(2.3-4.3)	(0.0-0.3)	(1.2-1.5)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	ND<0.006	NT	NT	0.012	NT	0.009
Arsenic	NA	NA	0.5	ND<0.05	NT	NT	ND<0.05	NT	ND<0.05
Barium	NA	NA	10	0.21	NT	NT	0.27	NT	0.30
Copper	NA	NA	13	ND<0.04	NT	NT	ND<0.04	NT	ND<0.04
Lead	NA	NA	0.15	ND<0.013	NT	NT	ND<0.013	NT	0.05
Mercury	NA	NA	0.02	ND<0.002	NT	NT	ND<0.002	NT	ND<0.002
Nickel	NA	NA	1.0	ND<0.05	NT	NT	ND<0.05	NT	ND<0.05
Selenium	NA	NA	0.50	ND<0.01	NT	NT	ND<0.01	NT	ND<0.01
Thallium	NA	NA	0.05	ND<0.005	NT	NT	ND<0.005	NT	ND<0.005
Vanadium	NA	NA	0.50	ND<0.05	NT	NT	ND<0.05	NT	ND<0.05
Zinc	NA	NA	50	0.15	NT	NT	0.28	NT	0.22
Total Metals									
Antimony	27	8,200	NA	3.6	NT	NT	2.2	NT	ND<2.0
Arsenic	10	10	NA	110	NT	NT	11	NT	25
Barium	4,700	140,000	NA	52	NT	NT	45	NT	110
Beryllium	2	2	NA	ND<1.0	NT	NT	ND<1.0	NT	ND<1.0
Cadmium	34	1,000	NA	7.3	NT	NT	2.7	NT	2.4
Chromium	100*	100*	NA	7.9	NT	NT	16	NT	9.0
Copper	2,500	76,000	NA	64	NT	NT	290	NT	140
Lead	500	1,000	NA	220	NT	NT	180	NT	270
Mercury	20	610	NA	0.44	NT	NT	1.1	NT	0.34
Nickel	1,400	7,500	NA	2.4	NT	NT	19	NT	15
Selenium	340	10,000	NA	7.5	NT	NT	ND<1.0	NT	ND<1.0

Table AOC-12.2

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB Area	TB-SSSS	TB-TTTT	TB-TTTT	TB-TTTT	TB-UUUU	TB-UUUU
Depth Below Grade (ft.)				(2.5-4.5)	(0.0-0.3)	(1-1.3)	(2.3-4.3)	(0.0-0.3)	(1.2-1.5)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	ND<2.0	NT	NT	ND<2.0	NT	ND<2.0
Thallium	5.4	160	NA	27	NT	NT	8.5	NT	7.7
Vanadium	470	14,000	NA	59	NT	NT	43	NT	39
Zinc	20,000	610,000	NA	11	NT	NT	270	NT	220
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	ND<50	NT	NT	ND<50	NT	ND<50

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-UUUU	TB-VVVV	TB-WVV	TB-WVV	TB-WWWW	TB-WWWW
Depth Below Grade (ft.)			GB Area	(5-7)	(0.0-0.3)	(0.5-2.5)	(2.5-4.5)	(0.0-0.3)	(2.2-2.5)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	0.22	NT	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	ND<0.20	NT	NT	NT
Anthracene	1,000	2,500	400	NT	NT	0.67	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	1.5	NT	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	1.6	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	2.5	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	0.57	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	1.0	NT	NT	NT
Chrysene	84	780	1	NT	NT	1.6	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	ND<0.20	NT	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	3.2	NT	NT	NT
Fluorene	1,000	2,500	56	NT	NT	ND<0.20	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	0.57	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	ND<0.20	NT	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	2.9	NT	NT	NT
Pyrene	1,000	2,500	40	NT	NT	2.7	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	ND<0.25	NT	ND<0.25	NT	NT	NT
Isopropylbenzene	500	1,000	132	ND<0.25	NT	ND<0.25	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	ND<0.25	NT	ND<0.25	NT	NT	NT
Naphthalene	1,000	2,500	56	ND<0.25	NT	ND<0.25	NT	NT	NT
n-Propylbenzene	500	1,000	14	ND<0.25	NT	ND<0.25	NT	NT	NT
Tetrachloroethene	12	110	1	ND<0.25	NT	ND<0.25	NT	NT	NT
Toluene	500	1,000	67	ND<0.25	NT	ND<0.25	NT	NT	NT
Trichloroethene	56	520	1.0	ND<0.25	NT	ND<0.25	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	ND<0.25	NT	ND<0.25	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	ND<0.25	NT	ND<0.25	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	ND<0.25	NT	ND<0.25	NT	NT	NT
Xylenes (total)	500	1,000	19.5	ND<0.25	NT	ND<0.25	NT	NT	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-UUUU	TB-VVVV	TB-VVVV	TB-VVVV	TB-WWWW	TB-WWWW
Depth Below Grade (ft.)			GB Area	(5-7)	(0.0-0.3)	(0.5-2.5)	(2.5-4.5)	(0.0-0.3)	(2.2-2.5)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	NT	ND<0.006	NT	NT	NT
Arsenic	NA	NA	0.5	NT	NT	ND<0.05	NT	NT	NT
Barium	NA	NA	10	NT	NT	0.19	NT	NT	NT
Copper	NA	NA	13	NT	NT	ND<0.04	NT	NT	NT
Lead	NA	NA	0.15	NT	NT	ND<0.013	NT	NT	NT
Mercury	NA	NA	0.02	NT	NT	ND<0.002	NT	NT	NT
Nickel	NA	NA	1.0	NT	NT	ND<0.05	NT	NT	NT
Selenium	NA	NA	0.50	NT	NT	ND<0.01	NT	NT	NT
Thallium	NA	NA	0.05	NT	NT	ND<0.005	NT	NT	NT
Vanadium	NA	NA	0.50	NT	NT	ND<0.05	NT	NT	NT
Zinc	NA	NA	50	NT	NT	0.21	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	ND<2.0	NT	NT	NT
Arsenic	10	10	NA	NT	NT	18	NT	NT	NT
Barium	4,700	140,000	NA	NT	NT	59	NT	NT	NT
Beryllium	2	2	NA	NT	NT	ND<1.0	NT	NT	NT
Cadmium	34	1,000	NA	NT	NT	1.9	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	5.7	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	180	NT	NT	NT
Lead	500	1,000	NA	NT	NT	190	NT	NT	NT
Mercury	20	610	NA	NT	NT	0.74	NT	NT	NT
Nickel	1,400	7,500	NA	NT	NT	7.2	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	ND<1.0	NT	NT	NT

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Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/Commercial	GB Area	TB-UUUU	TB-VVVV	TB-VVVV	TB-VVVV	TB-WWWW	TB-WWWW
Depth Below Grade (ft.)				(5-7)	(0.0-0.3)	(0.5-2.5)	(2.5-4.5)	(0.0-0.3)	(2.2-2.5)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	ND<2.0	NT	NT	NT
Thallium	5.4	160	NA	NT	NT	7.1	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	22	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	210	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	1,400	NT	ND<50	NT	NT	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.


Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-WWWW	TB-XXXX	TB-XXXX	TB-XXXX	TB-YYYY	TB-YYYY
Depth Below Grade (ft.)			GB Area	(2.5-4.5)	(0.0-0.3)	(2.3-4.3)	(4.3-6.3)	(0.0-0.3)	(2-2.3)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	NT	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	NT	NT	NT
Anthracene	1,000	2,500	400	NT	NT	NT	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	NT	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	NT	NT	NT
Chrysene	84	780	1	NT	NT	NT	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	NT	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Fluorene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	NT	NT	NT
Pyrene	1,000	2,500	40	NT	NT	NT	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	NT	ND<0.005	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	ND<0.005	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	ND<0.005	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	ND<0.005	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	ND<0.005	NT	NT
Tetrachloroethene	12	110	1	NT	NT	NT	ND<0.005	NT	NT
Toluene	500	1,000	67	NT	NT	NT	ND<0.005	NT	NT
Trichloroethene	56	520	1.0	NT	NT	NT	ND<0.005	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	ND<0.005	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.005	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.005	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	ND<0.005	NT	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-WWWW	TB-XXXX	TB-XXXX	TB-XXXX	TB-YYYY	TB-YYYY
Depth Below Grade (ft.)			GB Area	(2.5-4.5)	(0.0-0.3)	(2.3-4.3)	(4.3-6.3)	(0.0-0.3)	(2-2.3)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	NT	NT	NT	NT	NT
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT	NT
Copper	NA	NA	13	NT	NT	NT	NT	NT	NT
Lead	NA	NA	0.15	NT	NT	NT	NT	NT	NT
Mercury	NA	NA	0.02	NT	NT	NT	NT	NT	NT
Nickel	NA	NA	1.0	NT	NT	NT	NT	NT	NT
Selenium	NA	NA	0.50	NT	NT	NT	NT	NT	NT
Thallium	NA	NA	0.05	NT	NT	NT	NT	NT	NT
Vanadium	NA	NA	0.50	NT	NT	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	NT	NT	NT
Arsenic	10	10	NA	NT	NT	NT	NT	NT	NT
Barium	4,700	140,000	NA	NT	NT	NT	NT	NT	NT
Beryllium	2	2	NA	NT	NT	NT	NT	NT	NT
Cadmium	34	1,000	NA	NT	NT	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	NT	NT	NT	NT
Lead	500	1,000	NA	NT	NT	NT	NT	NT	NT
Mercury	20	610	NA	NT	NT	NT	NT	NT	NT
Nickel	1,400	7,500	NA	NT	NT	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	NT	NT	NT	NT


Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB Area	TB-WWWW	TB-XXXX	TB-XXXX	TB-XXXX	TB-YYYY	TB-YYYY
Depth Below Grade (ft.)				(2.5-4.5)	(0.0-0.3)	(2.3-4.3)	(4.3-6.3)	(0.0-0.3)	(2-2.3)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	NT	NT	NT
Thallium	5.4	160	NA	NT	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	NT	NT	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-YYYY (2.5-3) 4/5/2002	TB-YYYY (3-5) 4/5/2002	TB-YYYY (5-7) 4/5/2002	TB-ZZZZ (0.0-0.3) 4/5/2002	TB-ZZZZ (0.3-2.3) 4/5/2002
Depth Below Grade (ft.)									
Sample Collection Date									
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	NT	ND<0.20	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	NT	ND<0.20	NT
Anthracene	1,000	2,500	400	NT	NT	NT	NT	ND<0.20	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	NT	ND<0.20	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	NT	ND<0.20	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	NT	ND<0.20	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	NT	ND<0.20	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	NT	ND<0.20	NT
Chrysene	84	780	1	NT	NT	NT	NT	ND<0.20	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	NT	ND<0.20	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	NT	ND<0.20	NT
Fluorene	1,000	2,500	56	NT	NT	NT	NT	ND<0.20	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	NT	ND<0.20	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	ND<0.20	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	NT	ND<0.20	NT
Pyrene	1,000	2,500	40	NT	NT	NT	NT	ND<0.20	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	ND<0.005	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	ND<0.005	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	ND<0.005	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	ND<0.005	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	ND<0.005	NT
Tetrachloroethene	12	110	1	NT	NT	NT	NT	ND<0.005	NT
Toluene	500	1,000	67	NT	NT	NT	NT	ND<0.005	NT
Trichloroethene	56	520	1.0	NT	NT	NT	NT	ND<0.005	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	ND<0.005	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	ND<0.005	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	ND<0.005	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	ND<0.005	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-YYYY	TB-YYYY	TB-YYYY	TB-ZZZZ	TB-ZZZZ
Depth Below Grade (ft.)					(2.5-3)	(3-5)	(5-7)	(0.0-0.3)	(0.3-2.3)
Sample Collection Date					4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA		NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06		NT	NT	NT	NT	ND<0.006
Arsenic	NA	NA	0.5		NT	NT	NT	NT	ND<0.05
Barium	NA	NA	10		NT	NT	NT	NT	0.16
Copper	NA	NA	13		NT	NT	NT	NT	ND<0.04
Lead	NA	NA	0.15		NT	NT	NT	NT	ND<0.013
Mercury	NA	NA	0.02		NT	NT	NT	NT	ND<0.002
Nickel	NA	NA	1.0		NT	NT	NT	NT	ND<0.05
Selenium	NA	NA	0.50		NT	NT	NT	NT	ND<0.01
Thallium	NA	NA	0.05		NT	NT	NT	NT	ND<0.005
Vanadium	NA	NA	0.50		NT	NT	NT	NT	ND<0.05
Zinc	NA	NA	50		NT	NT	NT	NT	0.12
Total Metals									
Antimony	27	8,200	NA		NT	NT	NT	NT	ND<2.0
Arsenic	10	10	NA		NT	NT	NT	NT	4.4
Barium	4,700	140,000	NA		NT	NT	NT	NT	17
Beryllium	2	2	NA		NT	NT	NT	NT	ND<1.0
Cadmium	34	1,000	NA		NT	NT	NT	NT	0.58
Chromium	100*	100*	NA		NT	NT	NT	NT	4.1
Copper	2,500	76,000	NA		NT	NT	NT	NT	8.8
Lead	500	1,000	NA		NT	NT	NT	NT	8.7
Mercury	20	610	NA		NT	NT	NT	NT	ND<0.20
Nickel	1,400	7,500	NA		NT	NT	NT	NT	5.1
Selenium	340	10,000	NA		NT	NT	NT	NT	ND<1.0

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/Commercial		TB-YYYY	TB-YYYY	TB-YYYY	TB-ZZZZ	TB-ZZZZ	TB-ZZZZ
Depth Below Grade (ft.)			GB Area	(2.5-3)	(3-5)	(5-7)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	NT	ND<2.0	NT
Thallium	5.4	160	NA	NT	NT	NT	NT	3.2	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	19	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	8.8	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	NT	ND<50	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- * = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-AAAAA	TB-AAAAA	TB-BBBBB	TB-BBBBB	TB-BBBBB
Depth Below Grade (ft.)					(0.0-0.3)	(0.5-2.5)	(0.0-0.3)	(0.5-2.5)	(2.5-4.5)
Sample Collection Date					4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	ND<0.20	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	ND<0.20	NT	NT
Anthracene	1,000	2,500	400	NT	NT	NT	ND<0.20	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	ND<0.20	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	ND<0.20	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	ND<0.20	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	ND<0.20	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	ND<0.20	NT	NT
Chrysene	84	780	1	NT	NT	NT	ND<0.20	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	ND<0.20	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	ND<0.20	NT	NT
Fluorene	1,000	2,500	56	NT	NT	NT	ND<0.20	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	ND<0.20	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	ND<0.20	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	ND<0.20	NT	NT
Pyrene	1,000	2,500	40	NT	NT	NT	ND<0.20	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	NT	ND<0.25	ND<0.005	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	ND<0.25	ND<0.005	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	ND<0.25	ND<0.005	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	ND<0.25	ND<0.005	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	ND<0.25	ND<0.005	NT
Tetrachloroethene	12	110	1	NT	NT	NT	ND<0.25	ND<0.005	NT
Toluene	500	1,000	67	NT	NT	NT	ND<0.25	ND<0.005	NT
Trichloroethene	56	520	1.0	NT	NT	NT	ND<0.25	ND<0.005	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	ND<0.25	ND<0.005	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.25	ND<0.005	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.25	ND<0.005	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	ND<0.25	ND<0.005	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-A-A-A-A-A	TB-A-A-A-A-A	TB-B-B-B-B-B	TB-B-B-B-B-B	TB-B-B-B-B-B
Depth Below Grade (ft.)					(0.0-0.3)	(0.5-2.5)	(0.0-0.3)	(0.5-2.5)	(2.5-4.5)
Sample Collection Date					4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	NT	NT	ND<0.006	NT	NT
Arsenic	NA	NA	0.5	NT	NT	NT	ND<0.05	NT	NT
Barium	NA	NA	10	NT	NT	NT	0.16	NT	NT
Copper	NA	NA	13	NT	NT	NT	ND<0.04	NT	NT
Lead	NA	NA	0.15	NT	NT	NT	ND<0.013	NT	NT
Mercury	NA	NA	0.02	NT	NT	NT	ND<0.002	NT	NT
Nickel	NA	NA	1.0	NT	NT	NT	ND<0.05	NT	NT
Selenium	NA	NA	0.50	NT	NT	NT	ND<0.01	NT	NT
Thallium	NA	NA	0.05	NT	NT	NT	ND<0.005	NT	NT
Vanadium	NA	NA	0.50	NT	NT	NT	ND<0.05	NT	NT
Zinc	NA	NA	50	NT	NT	NT	0.13	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	ND<2.0	NT	NT
Arsenic	10	10	NA	NT	NT	NT	1.9	NT	NT
Barium	4,700	140,000	NA	NT	NT	NT	35	NT	NT
Beryllium	2	2	NA	NT	NT	NT	ND<1.0	NT	NT
Cadmium	34	1,000	NA	NT	NT	NT	0.76	NT	NT
Chromium	100*	100*	NA	NT	NT	NT	5.0	NT	NT
Copper	2,500	76,000	NA	NT	NT	NT	16	NT	NT
Lead	500	1,000	NA	NT	NT	NT	14	NT	NT
Mercury	20	610	NA	NT	NT	NT	ND<0.20	NT	NT
Nickel	1,400	7,500	NA	NT	NT	NT	4.4	NT	NT
Selenium	340	10,000	NA	NT	NT	NT	ND<1.0	NT	NT

Table AOC-12.2

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-AAAAA	TB-AAAAA	TB-BBBBB	TB-BBBBB	TB-BBBBB	TB-BBBBB
Depth Below Grade (ft.)			GB Area	(0.0-0.3)	(0.5-2.5)	(0.0-0.3)	(0.5-2.5)	(2.5-4.5)	(4.5-5.5)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	ND<2.0	NT	NT
Thallium	5.4	160	NA	NT	NT	NT	5.2	NT	NT
Vanadium	470	14,000	NA	NT	NT	NT	19	NT	NT
Zinc	20,000	610,000	NA	NT	NT	NT	11	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	ND<50	NT	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- * = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-CCCCC	TB-CCCCC	TB-CCCCC	TB-DDDDD	TB-DDDDD	TB-EEEEEE
Depth Below Grade (ft.)				(0.0-0.3)	(2-4)	(4-5)	(0.0-0.3)	(0.5-0.8)	(0.0-0.3)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	NT	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	NT	NT	NT
Anthracene	1,000	2,500	400	NT	NT	NT	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	NT	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	NT	NT	NT
Chrysene	84	780	1	NT	NT	NT	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	NT	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Fluorene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	NT	NT	NT
Pyrene	1,000	2,500	40	NT	NT	NT	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	ND<0.25	NT	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	ND<0.25	NT	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	ND<0.25	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	ND<0.25	NT	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	ND<0.25	NT	NT	NT	NT
Tetrachloroethene	12	110	1	NT	ND<0.25	NT	NT	NT	NT
Toluene	500	1,000	67	NT	ND<0.25	NT	NT	NT	NT
Trichloroethene	56	520	1.0	NT	ND<0.25	NT	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	ND<0.25	NT	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	ND<0.25	NT	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	ND<0.25	NT	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	ND<0.25	NT	NT	NT	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-CCCCC (0.0-0.3) 4/5/2002	TB-CCCCC (2-4) 4/5/2002	TB-CCCCC (4-5) 4/5/2002	TB-DDDDD (0.0-0.3) 4/5/2002	TB-DDDDD (0.5-0.8) 4/5/2002
Depth Below Grade (ft.)									
Sample Collection Date									
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	NT	NT	NT	NT	NT
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT	NT
Copper	NA	NA	13	NT	NT	NT	NT	NT	NT
Lead	NA	NA	0.15	NT	NT	NT	NT	NT	NT
Mercury	NA	NA	0.02	NT	NT	NT	NT	NT	NT
Nickel	NA	NA	1.0	NT	NT	NT	NT	NT	NT
Selenium	NA	NA	0.50	NT	NT	NT	NT	NT	NT
Thallium	NA	NA	0.05	NT	NT	NT	NT	NT	NT
Vanadium	NA	NA	0.50	NT	NT	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	NT	NT	NT
Arsenic	10	10	NA	NT	NT	NT	NT	NT	NT
Barium	4,700	140,000	NA	NT	NT	NT	NT	NT	NT
Beryllium	2	2	NA	NT	NT	NT	NT	NT	NT
Cadmium	34	1,000	NA	NT	NT	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	NT	NT	NT	NT
Lead	500	1,000	NA	NT	NT	NT	NT	NT	NT
Mercury	20	610	NA	NT	NT	NT	NT	NT	NT
Nickel	1,400	7,500	NA	NT	NT	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	NT	NT	NT	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-CCCCC	TB-CCCCC	TB-CCCCC	TB-DDDDD	TB-DDDDD
Depth Below Grade (ft.)				(0.0-0.3)	(2-4)	(4-5)	(0.0-0.3)	(0.5-0.8)	(0.0-0.3)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	NT	NT	NT	NT
Thallium	5.4	160	NA	NT	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	NT	NT	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- * = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table C-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB Area	TB-EEEE	TB-EEEE	TB-FFFF	TB-FFFF	TB-GGGG	TB-GGGG
Depth Below Grade (ft.)				(0.3-2.3)	(2.3-4.3)	(0.0-0.3)	(0.5-0.8)	(0.0-0.3)	(0.5-1.2)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	0.50	NT	NT	NT	NT	NT
Acenaphthylene	1,000	2,500	84	ND<0.20	NT	NT	NT	NT	NT
Anthracene	1,000	2,500	400	0.88	NT	NT	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	1.7	NT	NT	NT	NT	NT
Benzo[a]pyrene	1	1	1	2.0	NT	NT	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	3.1	NT	NT	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	0.87	NT	NT	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	1.4	NT	NT	NT	NT	NT
Chrysene	84	780	1	1.7	NT	NT	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	0.23	NT	NT	NT	NT	NT
Fluoranthene	1,000	2,500	56	4.6	NT	NT	NT	NT	NT
Fluorene	1,000	2,500	56	0.59	NT	NT	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	1.0	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	0.65	NT	NT	NT	NT	NT
Phenanthrene	1,000	2,500	40	4.8	NT	NT	NT	NT	NT
Pyrene	1,000	2,500	40	3.6	NT	NT	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	ND<0.25	NT	NT	NT	NT	NT
Isopropylbenzene	500	1,000	132	ND<0.25	NT	NT	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	ND<0.25	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	ND<0.25	NT	NT	NT	NT	NT
n-Propylbenzene	500	1,000	14	ND<0.25	NT	NT	NT	NT	NT
Tetrachloroethene	12	110	1	ND<0.25	NT	NT	NT	NT	NT
Toluene	500	1,000	67	ND<0.25	NT	NT	NT	NT	NT
Trichloroethene	56	520	1.0	ND<0.25	NT	NT	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	ND<0.25	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	ND<0.25	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	ND<0.25	NT	NT	NT	NT	NT
Xylenes (total)	500	1,000	19.5	ND<0.25	NT	NT	NT	NT	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-EEEEEE (0.3-2.3) 4/5/2002	TB-EEEEEE (2.3-4.3) 4/5/2002	TB-FFFFF (0.0-0.3) 4/5/2002	TB-FFFFF (0.5-0.8) 4/5/2002	TB-GGGGG (0.0-0.3) 4/5/2002
Depth Below Grade (ft.)									
Sample Collection Date									
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	ND<0.006	NT	NT	NT	NT	NT
Arsenic	NA	NA	0.5	ND<0.05	NT	NT	NT	NT	NT
Barium	NA	NA	10	0.36	NT	NT	NT	NT	NT
Copper	NA	NA	13	ND<0.04	NT	NT	NT	NT	NT
Lead	NA	NA	0.15	ND<0.013	NT	NT	NT	NT	NT
Mercury	NA	NA	0.02	ND<0.002	NT	NT	NT	NT	NT
Nickel	NA	NA	1.0	ND<0.05	NT	NT	NT	NT	NT
Selenium	NA	NA	0.50	ND<0.01	NT	NT	NT	NT	NT
Thallium	NA	NA	0.05	ND<0.005	NT	NT	NT	NT	NT
Vanadium	NA	NA	0.50	ND<0.05	NT	NT	NT	NT	NT
Zinc	NA	NA	50	0.23	NT	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA	ND<2.0	NT	NT	NT	NT	NT
Arsenic	10	10	NA	2.7	NT	NT	NT	NT	NT
Barium	4,700	140,000	NA	26	NT	NT	NT	NT	NT
Beryllium	2	2	NA	ND<1.0	NT	NT	NT	NT	NT
Cadmium	34	1,000	NA	1.0	NT	NT	NT	NT	NT
Chromium	100*	100*	NA	6.7	NT	NT	NT	NT	NT
Copper	2,500	76,000	NA	42	NT	NT	NT	NT	NT
Lead	500	1,000	NA	21	NT	NT	NT	NT	NT
Mercury	20	610	NA	ND<0.20	NT	NT	NT	NT	NT
Nickel	1,400	7,500	NA	9.2	NT	NT	NT	NT	NT
Selenium	340	10,000	NA	ND<1.0	NT	NT	NT	NT	NT

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Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-EEEEEE	TB-EEEEEE	TB-FFFFF	TB-FFFFF	TB-GGGGG
Depth Below Grade (ft.)				(0.3-2.3)	(2.3-4.3)	(0.0-0.3)	(0.5-0.8)	(0.0-0.3)	(0.5-1.2)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	ND<2.0	NT	NT	NT	NT	NT
Thallium	5.4	160	NA	6.1	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	42	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	33	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	ND<50	NT	NT	NT	NT	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-HHHHH	TB-HHHHH	TB-HHHHH	TB-IIIII	TB-JJJJJ	TB-JJJJJ
Depth Below Grade (ft.)				(0.0-0.3)	(0.5-2.5)	(2.5-4.5)	(0.0-0.3)	(0.0-0.3)	(0.3-2.3)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	ND<0.20	NT	NT	NT	ND<0.20
Acenaphthylene	1,000	2,500	84	NT	ND<0.20	NT	NT	NT	ND<0.20
Anthracene	1,000	2,500	400	NT	0.28	NT	NT	NT	ND<0.20
Benzo[a]anthracene	1	7.8	1	NT	1.2	NT	NT	NT	0.37
Benzo[a]pyrene	1	1	1	NT	1.3	NT	NT	NT	0.59
Benzo[b]fluoranthene	1	7.8	1	NT	2.1	NT	NT	NT	0.73
Benzo[g,h,i]perylene	1,000	2,500	42	NT	0.53	NT	NT	NT	0.34
Benzo[k]fluoranthene	8.4	78	1	NT	0.84	NT	NT	NT	0.58
Chrysene	84	780	1	NT	1.3	NT	NT	NT	0.37
Dibenz[a,h]anthracene	1	1	1	NT	ND<0.20	NT	NT	NT	ND<0.20
Fluoranthene	1,000	2,500	56	NT	2.3	NT	NT	NT	0.57
Fluorene	1,000	2,500	56	NT	ND<0.20	NT	NT	NT	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	0.62	NT	NT	NT	0.36
Naphthalene	1,000	2,500	56	NT	ND<0.20	NT	NT	NT	ND<0.20
Phenanthrene	1,000	2,500	40	NT	1.6	NT	NT	NT	ND<0.20
Pyrene	1,000	2,500	40	NT	2.1	NT	NT	NT	0.64
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	ND<0.25	ND<0.25	ND<0.005	NT	ND<0.005
Isopropylbenzene	500	1,000	132	NT	ND<0.25	ND<0.25	ND<0.005	NT	ND<0.005
4-Isopropyltoluene	500	1,000	41.8	NT	ND<0.25	ND<0.25	ND<0.005	NT	ND<0.005
Naphthalene	1,000	2,500	56	NT	ND<0.25	ND<0.25	ND<0.005	NT	ND<0.005
n-Propylbenzene	500	1,000	14	NT	ND<0.25	ND<0.25	ND<0.005	NT	ND<0.005
Tetrachloroethene	12	110	1	NT	ND<0.25	ND<0.25	ND<0.005	NT	ND<0.005
Toluene	500	1,000	67	NT	ND<0.25	ND<0.25	ND<0.005	NT	ND<0.005
Trichloroethene	56	520	1.0	NT	ND<0.25	ND<0.25	ND<0.005	NT	ND<0.005
1,1,1-Trichloroethane	500	1,000	40	NT	ND<0.25	ND<0.25	ND<0.005	NT	ND<0.005
1,2,4-Trimethylbenzene	500	1,000	70	NT	ND<0.25	ND<0.25	ND<0.005	NT	ND<0.005
1,3,5-Trimethylbenzene	500	1,000	70	NT	ND<0.25	ND<0.25	ND<0.005	NT	ND<0.005
Xylenes (total)	500	1,000	19.5	NT	ND<0.25	ND<0.25	ND<0.005	NT	ND<0.005

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-HHHHH (0.0-0.3) 4/5/2002	TB-HHHHH (0.5-2.5) 4/5/2002	TB-HHHHH (2.5-4.5) 4/5/2002	TB-IIIII (0.0-0.3) 4/5/2002	TB-JJJJJ (0.0-0.3) 4/5/2002
Depth Below Grade (ft.)									
Sample Collection Date									
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	NT	ND<0.006	NT	NT	NT	ND<0.006
Arsenic	NA	NA	0.5	NT	ND<0.05	NT	NT	NT	ND<0.05
Barium	NA	NA	10	NT	0.41	NT	NT	NT	0.34
Copper	NA	NA	13	NT	ND<0.04	NT	NT	NT	ND<0.04
Lead	NA	NA	0.15	NT	0.015	NT	NT	NT	ND<0.013
Mercury	NA	NA	0.02	NT	ND<0.002	NT	NT	NT	ND<0.002
Nickel	NA	NA	1.0	NT	ND<0.05	NT	NT	NT	ND<0.05
Selenium	NA	NA	0.50	NT	ND<0.01	NT	NT	NT	ND<0.01
Thallium	NA	NA	0.05	NT	ND<0.005	NT	NT	NT	ND<0.005
Vanadium	NA	NA	0.50	NT	ND<0.05	NT	NT	NT	ND<0.05
Zinc	NA	NA	50	NT	0.28	NT	NT	NT	0.34
Total Metals									
Antimony	27	8,200	NA	NT	2.2	NT	NT	NT	ND<2.0
Arsenic	10	10	NA	NT	120	NT	NT	NT	ND<1.0
Barium	4,700	140,000	NA	NT	67	NT	NT	NT	37
Beryllium	2	2	NA	NT	ND<1.0	NT	NT	NT	ND<1.0
Cadmium	34	1,000	NA	NT	8.1	NT	NT	NT	0.74
Chromium	100*	100*	NA	NT	8.1	NT	NT	NT	7.1
Copper	2,500	76,000	NA	NT	75	NT	NT	NT	10
Lead	500	1,000	NA	NT	86	NT	NT	NT	13
Mercury	20	610	NA	NT	0.34	NT	NT	NT	ND<0.20
Nickel	1,400	7,500	NA	NT	4.6	NT	NT	NT	4.1
Selenium	340	10,000	NA	NT	1.5	NT	NT	NT	ND<1.0

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/Commercial	GB Area	TB-HHHHH	TB-HHHHH	TB-HHHHH	TB-IIIII	TB-JJJJJ	TB-JJJJJ
Depth Below Grade (ft.)				(0.0-0.3)	(0.5-2.5)	(2.5-4.5)	(0.0-0.3)	(0.0-0.3)	(0.3-2.3)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002	4/5/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	ND<2.0	NT	NT	NT	ND<2.0
Thallium	5.4	160	NA	NT	42	NT	NT	NT	4.8
Vanadium	470	14,000	NA	NT	44	NT	NT	NT	18
Zinc	20,000	610,000	NA	NT	14	NT	NT	NT	14
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	ND<50	NT	NT	NT	ND<50

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- (1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.
- (2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.
- (3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.
- (4) = Submitted as a Quality Control (QC) duplicate sample.
- ☐ = Concentration exceeds associated criterion.

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)			
	Residential	Industrial/ Commercial	GB Area	TB-JJJJJ	TB-KKKKK	TB-KKKKK	TB-KKKKK
Depth Below Grade (ft.)				(2.3-4.3)	(0.0-0.3)	(1-2)	(4-5)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)							
Acenaphthene	1,000	2,500	84	ND<0.20	NT	NT	NT
Acenaphthylene	1,000	2,500	84	0.50	NT	NT	NT
Anthracene	1,000	2,500	400	0.22	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	1.1	NT	NT	NT
Benzo[a]pyrene	1	1	1	1.9	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	2.6	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	0.96	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	1.2	NT	NT	NT
Chrysene	84	780	1	1.3	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	0.22	NT	NT	NT
Fluoranthene	1,000	2,500	56	1.8	NT	NT	NT
Fluorene	1,000	2,500	56	ND<0.20	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	1.0	NT	NT	NT
Naphthalene	1,000	2,500	56	ND<0.20	NT	NT	NT
Phenanthrene	1,000	2,500	40	0.72	NT	NT	NT
Pyrene	1,000	2,500	40	2.0	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)							
Ethylbenzene	500	1,000	10.1	ND<0.25	NT	NT	NT
Isopropylbenzene	500	1,000	132	ND<0.25	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	ND<0.25	NT	NT	NT
Naphthalene	1,000	2,500	56	ND<0.25	NT	NT	NT
n-Propylbenzene	500	1,000	14	ND<0.25	NT	NT	NT
Tetrachloroethene	12	110	1	ND<0.25	NT	NT	NT
Toluene	500	1,000	67	ND<0.25	NT	NT	NT
Trichloroethene	56	520	1.0	ND<0.25	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	ND<0.25	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	ND<0.25	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	ND<0.25	NT	NT	NT
Xylenes (total)	500	1,000	19.5	ND<0.25	NT	NT	NT

Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)			
	Residential	Industrial/ Commercial	GB Area	TB-JJJJJ	TB-KKKKK	TB-KKKKK	TB-KKKKK
Depth Below Grade (ft.)				(2.3-4.3)	(0.0-0.3)	(1-2)	(4-5)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)							
PCB-1242	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NT	NT	NT	NT
SPLP Metals							
Antimony	NA	NA	0.06	ND<0.006	NT	NT	NT
Arsenic	NA	NA	0.5	ND<0.05	NT	NT	NT
Barium	NA	NA	10	0.43	NT	NT	NT
Copper	NA	NA	13	ND<0.04	NT	NT	NT
Lead	NA	NA	0.15	ND<0.013	NT	NT	NT
Mercury	NA	NA	0.02	ND<0.002	NT	NT	NT
Nickel	NA	NA	1.0	ND<0.05	NT	NT	NT
Selenium	NA	NA	0.50	ND<0.01	NT	NT	NT
Thallium	NA	NA	0.05	ND<0.005	NT	NT	NT
Vanadium	NA	NA	0.50	ND<0.05	NT	NT	NT
Zinc	NA	NA	50	0.34	NT	NT	NT
Total Metals							
Antimony	27	8,200	NA	ND<2.0	NT	NT	NT
Arsenic	10	10	NA	ND<1.0	NT	NT	NT
Barium	4,700	140,000	NA	36	NT	NT	NT
Beryllium	2	2	NA	ND<1.0	NT	NT	NT
Cadmium	34	1,000	NA	0.71	NT	NT	NT
Chromium	100*	100*	NA	6.8	NT	NT	NT
Copper	2,500	76,000	NA	13	NT	NT	NT
Lead	500	1,000	NA	17	NT	NT	NT
Mercury	20	610	NA	ND<0.20	NT	NT	NT
Nickel	1,400	7,500	NA	5.3	NT	NT	NT
Selenium	340	10,000	NA	ND<1.0	NT	NT	NT


Table AOC-12.2
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)			
	Residential	Industrial/ Commercial	GB Area	TB-JJJJJ	TB-KKKKK	TB-KKKKK	TB-KKKKK
Depth Below Grade (ft.)				(2.3-4.3)	(0.0-0.3)	(1-2)	(4-5)
Sample Collection Date				4/5/2002	4/5/2002	4/5/2002	4/5/2002
Total Metals (Cont'd)							
Silver	340	10,000	NA	ND<2.0	NT	NT	NT
Thallium	5.4	160	NA	4.2	NT	NT	NT
Vanadium	470	14,000	NA	16	NT	NT	NT
Zinc	20,000	610,000	NA	17	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	ND<50	NT	NT	NT

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

(1) = Not enough residual sample to analyze for leachable (SPLP) PCBs. Additional sample was collected for SPLP PCB testing on May 8, 2002. SPLP PCBs were not detected above the laboratory minimum detection limit.

(2) = Sample also tested for leachable (SPLP) PCBs. None detected above laboratory minimum detection limit.

(3) = Sample also tested for hexavalent chromium. None detected above laboratory minimum detection limit.

(4) = Submitted as a Quality Control (QC) duplicate sample.

☐ = Concentration exceeds associated criterion.

Table AOC-12.3
Comparison of Surface Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	SS-AA	SS-AA	SS-BB	SS-BB	SS-CC
Depth Below Grade (ft.)				(0.0-0.3)	(0.3-1.3)	(0.0-0.3)	(0.3-1.3)	(0.0-0.3)	(0.3-1.3)
Sample Collection Date				4/3/02	4/3/02	4/3/02	4/3/02	4/3/02	4/3/02
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	ND<0.20	NT	NT	NT	ND<1.0
Acenaphthylene	1,000	2,500	84	NT	ND<0.20	NT	NT	NT	ND<1.0
Anthracene	1,000	2,500	400	NT	ND<0.20	NT	NT	NT	ND<1.0
Benzo[a]anthracene	1	7.8	1	NT	0.82	NT	NT	NT	1.3
Benzo[a]pyrene	1	1	1	NT	1.0	NT	NT	NT	1.6
Benzo[b]fluoranthene	1	7.8	1	NT	1.5	NT	NT	NT	2.0
Benzo[g,h,i]perylene	1,000	2,500	42	NT	0.47	NT	NT	NT	1.5
Benzo[k]fluoranthene	8.4	78	1	NT	0.61	NT	NT	NT	ND<1.0
Chrysene	84	780	1	NT	0.80	NT	NT	NT	1.8
Dibenz[a,h]anthracene	1	1	1	NT	ND<0.20	NT	NT	NT	ND<1.0
Fluoranthene	1,000	2,500	56	NT	1.1	NT	NT	NT	2.2
Fluorene	1,000	2,500	56	NT	ND<0.20	NT	NT	NT	ND<1.0
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	0.59	NT	NT	NT	1.4
Naphthalene	1,000	2,500	56	NT	ND<0.20	NT	NT	NT	ND<1.0
Phenanthrene	1,000	2,500	40	NT	0.59	NT	NT	NT	2.0
Pyrene	1,000	2,500	40	NT	1.1	NT	NT	NT	2.3
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1260	1	10	NA	ND<0.50 ⁽¹⁾	0.83 ⁽¹⁾	ND<0.50	ND<0.50	ND<0.50	ND<0.50

Table AOC-12.3
Comparison of Surface Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	SS-AA	SS-AA	SS-BB	SS-BB	SS-CC
Depth Below Grade (ft.)					(0.0-0.3)	(0.3-1.3)	(0.0-0.3)	(0.3-1.3)	(0.0-0.3)
Sample Collection Date					4/3/02	4/3/02	4/3/02	4/3/02	4/3/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	ND<0.25	NT	NT	NT	ND<1.3
Isopropylbenzene	500	1,000	132	NT	ND<0.25	NT	NT	NT	ND<1.3
Naphthalene	1,000	2,500	56	NT	ND<0.25	NT	NT	NT	ND<1.3
n-Propylbenzene	500	1,000	14	NT	ND<0.25	NT	NT	NT	ND<1.3
Toluene	500	1,000	67	NT	ND<0.25	NT	NT	NT	ND<1.3
1,1,1-Trichloroethane	500	1,000	40	NT	ND<0.25	NT	NT	NT	ND<1.3
1,2,4-Trimethylbenzene	500	1,000	70	NT	ND<0.25	NT	NT	NT	ND<1.3
1,3,5-Trimethylbenzene	500	1,000	70	NT	ND<0.25	NT	NT	NT	ND<1.3
Xylenes (total)	500	1,000	19.5	NT	ND<0.25	NT	NT	NT	ND<1.3
SPLP Metals									
Arsenic	NA	NA	0.5	NT	ND<0.05	NT	NT	NT	ND<0.05
Barium	NA	NA	10	NT	0.17	NT	NT	NT	0.25
Copper	NA	NA	13	NT	ND<0.04	NT	NT	NT	ND<0.04
Lead	NA	NA	0.15	NT	0.035	NT	NT	NT	ND<0.013
Mercury	NA	NA	0.02	NT	ND<0.002	NT	NT	NT	ND<0.002
Selenium	NA	NA	0.5	NT	ND<0.01	NT	NT	NT	ND<0.01
Vanadium	NA	NA	0.5	NT	0.055	NT	NT	NT	ND<0.05
Zinc	NA	NA	50	NT	0.21	NT	NT	NT	0.26

Table AOC-12.3

Comparison of Surface Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	SS-AA (0.0-0.3)	SS-AA (0.3-1.3)	SS-BB (0.0-0.3)	SS-BB (0.3-1.3)	SS-CC (0.0-0.3)
Depth Below Grade (ft.)				4/3/02	4/3/02	4/3/02	4/3/02	4/3/02	4/3/02
Sample Collection Date									
Total Metals									
Antimony	27	8,200	NA	NT	ND<2.0	NT	NT	NT	ND<2.0
Arsenic	10	10	NA	NT	22	NT	NT	NT	14
Barium	4,700	140,000	NA	NT	43	NT	NT	NT	58
Beryllium	2	2	NA	NT	ND<1.0	NT	NT	NT	ND<1.0
Cadmium	34	1,000	NA	NT	2.5	NT	NT	NT	1.4
Chromium	100*	100*	NA	NT	7.1	NT	NT	NT	12
Copper	2,500	76,000	NA	NT	95	NT	NT	NT	110
Lead	500	1,000	NA	NT	170	NT	NT	NT	160
Mercury	20	610	NA	NT	0.24	NT	NT	NT	ND<0.20
Nickel	1,400	7,500	NA	NT	28	NT	NT	NT	18
Selenium	340	10,000	NA	NT	ND<1.0	NT	NT	NT	1.1
Silver	340	10,000	NA	NT	ND<2.0	NT	NT	NT	ND<2.0
Thallium	5.4	160	NA	NT	14	NT	NT	NT	4.3
Vanadium	470	14,000	NA	NT	180	NT	NT	NT	32
Zinc	20,000	610,000	NA	NT	170	NT	NT	NT	73
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	ND<50	NT	NT	NT	ND<50

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure.

Units are milligrams per liter (mg/L).

* = 100 mg/kg for hexavalent chromium.

(1) = Sample also tested for leachable (SPLP) PCBs. SPLP PCBs were not detected above laboratory minimum detection limit.

☐ = Concentration exceeds associated criterion.

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Table AOC-12.3
Comparison of Surface Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		SS-DD	SS-DD	SS-EE	SS-EE	SS-FF	SS-GG
Depth Below Grade (ft.)				(0.0-0.3)	(0.3-1.3)	(0.0-0.3)	(0.3-1.3)	(0.0-0.3)	(0.0-0.3)
Sample Collection Date				4/3/02	4/3/02	4/3/02	4/3/02	4/3/02	4/3/02
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	0.71	NT	ND<0.20
Acenaphthylene	1,000	2,500	84	NT	NT	NT	0.24	NT	ND<0.20
Anthracene	1,000	2,500	400	NT	NT	NT	1.6	NT	ND<0.20
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	26	NT	1.2
Benzo[a]pyrene	1	1	1	NT	NT	NT	46	NT	1.3
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	110	NT	2.5
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	7.2	NT	0.45
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	66	NT	1.1
Chrysene	84	780	1	NT	NT	NT	33	NT	1.8
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	3.5	NT	0.20
Fluoranthene	1,000	2,500	56	NT	NT	NT	95	NT	1.7
Fluorene	1,000	2,500	56	NT	NT	NT	0.43	NT	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	11	NT	0.50
Naphthalene	1,000	2,500	56	NT	NT	NT	0.51	NT	0.29
Phenanthrene	1,000	2,500	40	NT	NT	NT	47	NT	1.7
Pyrene	1,000	2,500	40	NT	NT	NT	85	NT	2.2
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.80 ⁽¹⁾	ND<0.50

Table AOC-12.3
Comparison of Surface Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB Area	SS-DD	SS-DD	SS-EE	SS-EE	SS-FF	SS-GG
Depth Below Grade (ft.)				(0.0-0.3)	(0.3-1.3)	(0.0-0.3)	(0.3-1.3)	(0.0-0.3)	(0.0-0.3)
Sample Collection Date				4/3/02	4/3/02	4/3/02	4/3/02	4/3/02	4/3/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	NT	ND<0.005	NT	ND<0.25
Isopropylbenzene	500	1,000	132	NT	NT	NT	ND<0.005	NT	ND<0.25
Naphthalene	1,000	2,500	56	NT	NT	NT	ND<0.005	NT	ND<0.25
n-Propylbenzene	500	1,000	14	NT	NT	NT	ND<0.005	NT	ND<0.25
Toluene	500	1,000	67	NT	NT	NT	ND<0.005	NT	ND<0.25
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	ND<0.005	NT	ND<0.25
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.005	NT	ND<0.25
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.005	NT	ND<0.25
Xylenes (total)	500	1,000	19.5	NT	NT	NT	ND<0.005	NT	ND<0.25
SPLP Metals									
Arsenic	NA	NA	0.5	NT	NT	NT	ND<0.05	NT	ND<0.05
Barium	NA	NA	10	NT	NT	NT	0.73	NT	0.27
Copper	NA	NA	13	NT	NT	NT	ND<0.04	NT	ND<0.04
Lead	NA	NA	0.15	NT	NT	NT	ND<0.013	NT	ND<0.013
Mercury	NA	NA	0.02	NT	NT	NT	ND<0.002	NT	ND<0.002
Selenium	NA	NA	0.5	NT	NT	NT	ND<0.01	NT	ND<0.01
Vanadium	NA	NA	0.5	NT	NT	NT	ND<0.05	NT	ND<0.05
Zinc	NA	NA	50	NT	NT	NT	0.41	NT	0.31

Table AOC-12.3
Comparison of Surface Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	SS-DD	SS-DD	SS-EE	SS-EE	SS-FF
Depth Below Grade (ft.)				(0.0-0.3)	(0.3-1.3)	(0.0-0.3)	(0.3-1.3)	(0.0-0.3)	(0.0-0.3)
Sample Collection Date				4/3/02	4/3/02	4/3/02	4/3/02	4/3/02	4/3/02
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	ND<2.0	NT	ND<2.0
Arsenic	10	10	NA	NT	NT	NT	1.7	NT	20
Barium	4,700	140,000	NA	NT	NT	NT	35	NT	52
Beryllium	2	2	NA	NT	NT	NT	ND<1.0	NT	ND<1.0
Cadmium	34	1,000	NA	NT	NT	NT	1.1	NT	1.3
Chromium	100*	100*	NA	NT	NT	NT	7.0	NT	8.2
Copper	2,500	76,000	NA	NT	NT	NT	45	NT	130
Lead	500	1,000	NA	NT	NT	NT	29	NT	140
Mercury	20	610	NA	NT	NT	NT	ND<0.20	NT	ND<0.20
Nickel	1,400	7,500	NA	NT	NT	NT	9.0	NT	20
Selenium	340	10,000	NA	NT	NT	NT	ND<1.0	NT	2.2
Silver	340	10,000	NA	NT	NT	NT	ND<2.0	NT	ND<2.0
Thallium	5.4	160	NA	NT	NT	NT	8.5	NT	7.5
Vanadium	470	14,000	NA	NT	NT	NT	41	NT	130
Zinc	20,000	610,000	NA	NT	NT	NT	37	NT	36
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	480	NT	ND<50

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure.

Units are milligrams per liter (mg/L).

* = 100 mg/kg for hexavalent chromium.

(1) = Sample also tested for leachable (SPLP) PCBs. SPLP PCBs were not detected above laboratory minimum detection limit.

☐ = Concentration exceeds associated criterion.

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Table AOC-12.3
Comparison of Surface Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		SS-GG	SS-HH	SS-II	SS-JJ	SS-KK	SS-LL
Depth Below Grade (ft.)				(1.0-1.5)	(0.0-0.3)	(0.0-0.3)	(0.0-0.3)	(0.0-0.3)	(0.0-0.3)
Sample Collection Date				4/3/02	4/3/02	4/3/02	4/3/02	4/3/02	4/3/02
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	1.1	NT	ND<0.20	NT	NT	NT
Acenaphthylene	1,000	2,500	84	1.7	NT	ND<0.20	NT	NT	NT
Anthracene	1,000	2,500	400	8.8	NT	ND<0.20	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	11	NT	0.77	NT	NT	NT
Benzo[a]pyrene	1	1	1	13	NT	1.1	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	21	NT	1.9	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	2.8	NT	0.42	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	6.7	NT	0.82	NT	NT	NT
Chrysene	84	780	1	9.9	NT	1.2	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	1.2	NT	ND<0.20	NT	NT	NT
Fluoranthene	1,000	2,500	56	37	NT	1.4	NT	NT	NT
Fluorene	1,000	2,500	56	ND<0.20	NT	ND<0.20	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	3.4	NT	0.48	NT	NT	NT
Naphthalene	1,000	2,500	56	ND<0.20	NT	ND<0.20	NT	NT	NT
Phenanthrene	1,000	2,500	40	42	NT	1.3	NT	NT	NT
Pyrene	1,000	2,500	40	28	NT	1.7	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.83 ⁽¹⁾	ND<0.50

Table AOC-12.3

Comparison of Surface Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		SS-GG	SS-HH	SS-II	SS-JJ	SS-KK	SS-LL
Depth Below Grade (ft.)			GB Area	(1.0-1.5)	(0.0-0.3)	(0.0-0.3)	(0.0-0.3)	(0.0-0.3)	(0.0-0.3)
Sample Collection Date				4/3/02	4/3/02	4/3/02	4/3/02	4/3/02	4/3/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	ND<0.005	NT	0.015	NT	NT	NT
Isopropylbenzene	500	1,000	132	ND<0.005	NT	ND<0.005	NT	NT	NT
Naphthalene	1,000	2,500	56	ND<0.005	NT	ND<0.005	NT	NT	NT
n-Propylbenzene	500	1,000	14	ND<0.005	NT	ND<0.005	NT	NT	NT
Toluene	500	1,000	67	ND<0.005	NT	0.049	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	ND<0.005	NT	ND<0.005	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	ND<0.005	NT	ND<0.005	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	ND<0.005	NT	ND<0.005	NT	NT	NT
Xylenes (total)	500	1,000	19.5	ND<0.005	NT	0.095	NT	NT	NT
SPLP Metals									
Arsenic	NA	NA	0.5	ND<0.05	NT	ND<0.05	NT	NT	NT
Barium	NA	NA	10	0.25	NT	0.38	NT	NT	NT
Copper	NA	NA	13	ND<0.04	NT	ND<0.04	NT	NT	NT
Lead	NA	NA	0.15	ND<0.013	NT	0.076	NT	NT	NT
Mercury	NA	NA	0.02	ND<0.002	NT	ND<0.002	NT	NT	NT
Selenium	NA	NA	0.5	ND<0.01	NT	ND<0.01	NT	NT	NT
Vanadium	NA	NA	0.5	ND<0.05	NT	ND<0.05	NT	NT	NT
Zinc	NA	NA	50	0.24	NT	0.28	NT	NT	NT

Table AOC-12.3
Comparison of Surface Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	SS-GG	SS-HH	SS-II	SS-JJ	SS-KK
Depth Below Grade (ft.)				(1.0-1.5)	(0.0-0.3)	(0.0-0.3)	(0.0-0.3)	(0.0-0.3)	(0.0-0.3)
Sample Collection Date				4/3/02	4/3/02	4/3/02	4/3/02	4/3/02	4/3/02
Total Metals									
Antimony	27	8,200	NA	2.5	NT	ND<2.0	NT	NT	NT
Arsenic	10	10	NA	33	NT	9.3	NT	NT	NT
Barium	4,700	140,000	NA	85	NT	35	NT	NT	NT
Beryllium	2	2	NA	ND<1.0	NT	ND<1.0	NT	NT	NT
Cadmium	34	1,000	NA	2.6	NT	3.9	NT	NT	NT
Chromium	100*	100*	NA	12	NT	17	NT	NT	NT
Copper	2,500	76,000	NA	110	NT	95	NT	NT	NT
Lead	500	1,000	NA	430	NT	410	NT	NT	NT
Mercury	20	610	NA	3.1	NT	ND<0.20	NT	NT	NT
Nickel	1,400	7,500	NA	18	NT	19	NT	NT	NT
Selenium	340	10,000	NA	ND<1.0	NT	ND<1.0	NT	NT	NT
Silver	340	10,000	NA	ND<2.0	NT	ND<2.0	NT	NT	NT
Thallium	5.4	160	NA	18	NT	22	NT	NT	NT
Vanadium	470	14,000	NA	29	NT	92	NT	NT	NT
Zinc	20,000	610,000	NA	62	NT	43	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	ND<50	NT	70	NT	NT	NT

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure.
Units are milligrams per liter (mg/L).

* = 100 mg/kg for hexavalent chromium.

(1) = Sample also tested for leachable (SPLP) PCBs. SPLP PCBs were not detected above laboratory minimum detection limit.

☐ = Concentration exceeds associated criterion.

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Table AOC-12.3
Comparison of Surface Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial	GB Area	SS-MM	SS-NN	SS-OO	SS-PP	SS-PP
Depth Below Grade (ft.)				(0.0-0.3)	(0.0-0.3)	(0.0-0.3)	(0.0-0.3)	(1.0-1.3)
Sample Collection Date				4/3/02	4/3/02	4/3/02	4/4/02	4/4/02
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)								
Acenaphthene	1,000	2,500	84	ND<0.20	ND<0.20	ND<0.20	NT	ND<0.20
Acenaphthylene	1,000	2,500	84	ND<0.20	ND<0.20	ND<0.20	NT	ND<0.20
Anthracene	1,000	2,500	400	0.25	ND<0.20	ND<0.20	NT	ND<0.20
Benzo[a]anthracene	1	7.8	1	0.70	0.32	ND<0.20	NT	1.3
Benzo[a]pyrene	1	1	1	0.92	0.59	0.23	NT	1.6
Benzo[b]fluoranthene	1	7.8	1	1.7	0.87	0.33	NT	2.8
Benzo[g,h,i]perylene	1,000	2,500	42	0.62	ND<0.20	0.21	NT	0.69
Benzo[k]fluoranthene	8.4	78	1	0.77	0.28	ND<0.20	NT	1.2
Chrysene	84	780	1	0.96	0.64	0.20	NT	1.9
Dibenz[a,h]anthracene	1	1	1	ND<0.20	ND<0.20	ND<0.20	NT	ND<0.20
Fluoranthene	1,000	2,500	56	1.4	0.42	0.37	NT	2.6
Fluorene	1,000	2,500	56	ND<0.20	ND<0.20	ND<0.20	NT	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	0.65	ND<0.20	0.25	NT	0.89
Naphthalene	1,000	2,500	56	0.37	0.36	ND<0.20	NT	ND<0.20
Phenanthrene	1,000	2,500	40	0.78	0.89	0.25	NT	1.3
Pyrene	1,000	2,500	40	1.3	0.41	0.31	NT	2.5
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)								
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

Table C-12.3
Comparison of Surface Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial	GB Area	SS-MM	SS-NN	SS-OO	SS-PP	SS-PP
Depth Below Grade (ft.)				(0.0-0.3)	(0.0-0.3)	(0.0-0.3)	(0.0-0.3)	(1.0-1.3)
Sample Collection Date				4/3/02	4/3/02	4/3/02	4/4/02	4/4/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Ethylbenzene	500	1,000	10.1	ND<0.25	ND<0.25	NT	NT	NT
Isopropylbenzene	500	1,000	132	ND<0.25	ND<0.25	NT	NT	NT
Naphthalene	1,000	2,500	56	ND<0.25	ND<0.25	NT	NT	NT
n-Propylbenzene	500	1,000	14	ND<0.25	ND<0.25	NT	NT	NT
Toluene	500	1,000	67	ND<0.25	ND<0.25	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	ND<0.25	ND<0.25	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	ND<0.25	ND<0.25	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	ND<0.25	ND<0.25	NT	NT	NT
Xylenes (total)	500	1,000	19.5	ND<0.25	ND<0.25	NT	NT	NT
SPLP Metals								
Arsenic	NA	NA	0.5	ND<0.05	ND<0.05	ND<0.05	NT	ND<0.05
Barium	NA	NA	10	0.30	0.35	0.28	NT	0.26
Copper	NA	NA	13	ND<0.04	ND<0.04	ND<0.04	NT	ND<0.04
Lead	NA	NA	0.15	0.029	ND<0.013	ND<0.013	NT	0.065
Mercury	NA	NA	0.02	ND<0.002	ND<0.002	ND<0.002	NT	ND<0.002
Selenium	NA	NA	0.5	ND<0.01	ND<0.01	ND<0.01	NT	ND<0.01
Vanadium	NA	NA	0.5	ND<0.05	ND<0.05	ND<0.05	NT	ND<0.005
Zinc	NA	NA	50	0.18	0.14	0.17	NT	0.24

Table AOC-12.3
Comparison of Surface Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial	GB Area	SS-MM	SS-NN	SS-OO	SS-PP	SS-PP
Depth Below Grade (ft.)				(0.0-0.3)	(0.0-0.3)	(0.0-0.3)	(0.0-0.3)	(1.0-1.3)
Sample Collection Date				4/3/02	4/3/02	4/3/02	4/4/02	4/4/02
Total Metals								
Antimony	27	8,200	NA	ND<2.0	ND<2.0	ND<2.0	NT	ND<2.0
Arsenic	10	10	NA	16	20	10	NT	29
Barium	4,700	140,000	NA	32	40	33	NT	55
Beryllium	2	2	NA	ND<1.0	ND<1.0	ND<1.0	NT	ND<1.0
Cadmium	34	1,000	NA	2.0	0.75	0.90	NT	1.8
Chromium	100*	100*	NA	13	3.9	3.7	NT	8.0
Copper	2,500	76,000	NA	200	41	24	NT	50
Lead	500	1,000	NA	210	60	46	NT	160
Mercury	20	610	NA	0.65	ND<0.20	ND<0.20	NT	ND<0.20
Nickel	1,400	7,500	NA	11	3.5	3.7	NT	11
Selenium	340	10,000	NA	ND<1.0	2.4	2.0	NT	1.0
Silver	340	10,000	NA	ND<2.0	ND<2.0	ND<2.0	NT	ND<2.0
Thallium	5.4	160	NA	9.1	5.7	3.5	NT	8.8
Vanadium	470	14,000	NA	35	40	12	NT	58
Zinc	20,000	610,000	NA	130	8.5	16	NT	62
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	240	ND<50	NT	NT	ND<50

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leaching Procedure. Units are milligrams per liter (mg/L).
- * = 100 mg/kg for hexavalent chromium.
- (1) = Sample also tested for leachable (SPLP) PCBs. SPLP PCBs were not detected above laboratory minimum detection limit.
- ☐ = Concentration exceeds associated criterion.

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Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)						
	Residential	Industrial/ Commercial		TB-DDD	TB-FFF	TB-LLLLL	TB-LLLLL	TB-LLLLL	TB-LLLLL	TB-LLLLL
Depth Below Grade (ft.)			GB Area	(5-7)	(5-7)	(0.0-0.3)	(0.3-1.3)	(1.3-2.3)	(2.3-4.3)	(5-7)
Sampling Date				7/18/02	7/18/02	7/18/02	7/18/02	7/18/02	7/18/02	7/18/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)										
Acenaphthene	1,000	2,500	84	NT	NT	NT	ND<1.0	2.0	0.21	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	ND<1.0	ND<0.20	ND<0.20	NT
Anthracene	1,000	2,500	400	NT	NT	NT	ND<1.0	2.2	0.27	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	ND<1.0	8.5	1.6	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	ND<1.0	8.2	1.5	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	ND<1.0	11	1.9	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	ND<1.0	6.8	1.2	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	ND<1.0	3.3	0.77	NT
Chrysene	84	780	1	NT	NT	NT	ND<1.0	9.5	1.7	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	ND<1.0	1.8	0.33	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	ND<1.0	16	3.1	NT
Fluorene	1,000	2,500	56	NT	NT	NT	ND<1.0	1.1	ND<0.20	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	ND<1.0	7.5	1.3	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	ND<1.0	0.89	ND<0.20	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	ND<1.0	11	2.1	NT
Pyrene	1,000	2,500	40	NT	NT	NT	ND<1.0	14	2.7	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)										
Benzene	21	200	0.2	NT	0.05	NT	ND<0.001	NT	NT	NT
sec-Butylbenzene	500	1,000	14	NT	0.90	NT	ND<0.005	NT	NT	NT
Ethylbenzene	500	1,000	10.1	NT	3.1	NT	ND<0.005	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	1.8	NT	ND<0.005	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	2.6	NT	ND<0.005	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	3.0	NT	ND<0.005	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	3.6	NT	ND<0.005	NT	NT	NT
Tetrachloroethene	12	110	1	NT	ND<0.25	NT	ND<0.005	NT	NT	NT

Table South.1

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)						
	Residential	Industrial/ Commercial		TB-DDD	TB-FFF	TB-LLLLL	TB-LLLLL	TB-LLLLL	TB-LLLLL	TB-LLLLL
Depth Below Grade (ft.)			GB Area	(5-7)	(5-7)	(0.0-0.3)	(0.3-1.3)	(1.3-2.3)	(2.3-4.3)	(5-7)
Sampling Date				7/18/02	7/18/02	7/18/02	7/18/02	7/18/02	7/18/02	7/18/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)										
Toluene	500	1,000	67	NT	ND<0.25	NT	ND<0.005	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	ND<0.25	NT	ND<0.005	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	25	NT	ND<0.005	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	32	NT	ND<0.005	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	11.7	NT	ND<0.005	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)										
PCB-1260	1	10	NA	0.56	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082										
PCB-1260	NA	NA	0.005	ND<0.0005	NT	NT	NT	NT	NT	NT
SPLP Metals										
Arsenic	NA	NA	0.5	NT	NT	NT	NT	ND<0.004	ND<0.004	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT	0.82	NT
Copper	NA	NA	13	NT	NT	NT	NT	NT	ND<0.04	NT
Lead	NA	NA	0.15	NT	NT	NT	NT	NT	ND<0.013	NT
Thallium	NA	NA	0.05	NT	NT	NT	NT	NT	ND<0.005	NT
Vanadium	NA	NA	0.50	NT	NT	NT	NT	NT	ND<0.05	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT	0.41	NT
Total Metals										
Antimony	27	8,200	NA	NT	NT	NT	NT	NT	ND<2.0	NT
Arsenic	10	10	NA	11	9.2	1.0	1.5	1.2	1.2	ND<1.0
Barium	4,700	140,000	NA	NT	NT	NT	NT	NT	32	NT
Chromium	100*	100*	NA	NT	NT	NT	NT	NT	10	NT
Copper	2,500	76,000	NA	NT	NT	NT	NT	NT	47	NT
Lead	500	1,000	NA	NT	NT	NT	NT	NT	51	NT
Mercury	20	610	NA	NT	NT	NT	NT	NT	ND<0.20	NT

Table South.1

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)						
	Residential	Industrial/ Commercial		TB-DDD	TB-FFF	TB-L1LLL	TB-L1LLL	TB-L1LLL	TB-L1LLL	TB-L1LLL
Depth Below Grade (ft.)			GB Area	(5-7)	(5-7)	(0.0-0.3)	(0.3-1.3)	(1.3-2.3)	(2.3-4.3)	(5-7)
Sampling Date				7/18/02	7/18/02	7/18/02	7/18/02	7/18/02	7/18/02	7/18/02
Total Metals										
Nickel	1,400	7,500	NA	NT	NT	NT	NT	NT	10	NT
Selenium	340	10,000	NA	NT	NT	NT	NT	NT	ND<1.0	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	NT	43	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	NT	58	NT
Cyanide (Total)	1,400	41,000	NA	NT	ND<5.0	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	NT	NT	NT	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.
Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- ☐ = Concentration exceeds associated criterion.


Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-LLLLL	TB-LLLLL	TB-MMMMM	TB-MMMMM	TB-MMMMM
Depth Below Grade (ft.)					(15-17)	(20-22)	(0.0-0.3)	(0.3-1.3)	(1.3-2.3)
Sampling Date					7/18/02	7/18/02	7/18/02	7/18/02	7/18/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	ND<0.20	NT	ND<0.20
Acenaphthylene	1,000	2,500	84	NT	NT	NT	ND<0.20	NT	ND<0.20
Anthracene	1,000	2,500	400	NT	NT	NT	ND<0.20	NT	0.21
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	0.49	NT	0.62
Benzo[a]pyrene	1	1	1	NT	NT	NT	0.54	NT	0.64
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	0.64	NT	0.82
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	0.46	NT	0.57
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	0.26	NT	0.32
Chrysene	84	780	1	NT	NT	NT	0.56	NT	0.80
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	ND<0.20	NT	ND<0.20
Fluoranthene	1,000	2,500	56	NT	NT	NT	0.82	NT	1.4
Fluorene	1,000	2,500	56	NT	NT	NT	ND<0.20	NT	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	0.48	NT	0.60
Naphthalene	1,000	2,500	56	NT	NT	NT	ND<0.20	NT	ND<0.20
Phenanthrene	1,000	2,500	40	NT	NT	NT	0.27	NT	1.1
Pyrene	1,000	2,500	40	NT	NT	NT	0.79	NT	1.2
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Benzene	21	200	0.2	NT	NT	NT	NT	ND<0.001	NT
sec-Butylbenzene	500	1,000	14	NT	NT	NT	NT	ND<0.005	NT
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	ND<0.005	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	ND<0.005	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	ND<0.005	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	ND<0.005	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	ND<0.005	NT
Tetrachloroethene	12	110	1	NT	NT	NT	NT	ND<0.005	NT


Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-LLLLL	TB-LLLLL	TB-MMMMM	TB-MMMMM	TB-MMMMM
Depth Below Grade (ft.)					(15-17)	(20-22)	(0.0-0.3)	(0.3-1.3)	(1.3-2.3)
Sampling Date					7/18/02	7/18/02	7/18/02	7/18/02	7/18/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Toluene	500	1,000	67	NT	NT	NT	NT	ND<0.005	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	ND<0.005	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	ND<0.005	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	ND<0.005	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	ND<0.005	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1260	1	10	NA	ND<0.50	NT	ND<0.50	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082									
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT	NT
SPLP Metals									
Arsenic	NA	NA	0.5	NT	NT	NT	NT	ND<0.004	ND<0.004
Barium	NA	NA	10	NT	NT	NT	NT	1.0	1.0
Copper	NA	NA	13	NT	NT	NT	NT	ND<0.04	ND<0.04
Lead	NA	NA	0.15	NT	NT	NT	NT	ND<0.013	ND<0.013
Thallium	NA	NA	0.05	NT	NT	NT	NT	ND<0.005	ND<0.005
Vanadium	NA	NA	0.50	NT	NT	NT	NT	ND<0.05	ND<0.05
Zinc	NA	NA	50	NT	NT	NT	NT	0.56	0.52
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	NT	ND<2.0	ND<2.0
Arsenic	10	10	NA	ND<1.0	3.2	NT	ND<1.0	1.3	ND<1.0
Barium	4,700	140,000	NA	NT	NT	NT	NT	29	18
Chromium	100*	100*	NA	NT	NT	NT	NT	7.7	3.9
Copper	2,500	76,000	NA	NT	NT	NT	NT	39	45
Lead	500	1,000	NA	NT	NT	NT	NT	20	12
Mercury	20	610	NA	NT	NT	NT	NT	ND<0.20	ND<0.20


Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-LLLLL	TB-LLLLL	TB-MMMMM	TB-MMMMM	TB-MMMMM
Depth Below Grade (ft.)					(15-17)	(20-22)	(0.0-0.3)	(0.3-1.3)	(1.3-2.3)
Sampling Date					7/18/02	7/18/02	7/18/02	7/18/02	7/18/02
Total Metals									
Nickel	1,400	7,500	NA	NT	NT	NT	NT	8.6	7.0
Selenium	340	10,000	NA	NT	NT	NT	NT	ND<1.0	ND<1.0
Vanadium	470	14,000	NA	NT	NT	NT	NT	49	65
Zinc	20,000	610,000	NA	NT	NT	NT	NT	33	35
Cyanide (Total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	ND<50	NT	ND<50

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.
Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- ☐ = Concentration exceeds associated criterion.

Table South.1

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-MMMMM	TB-MMMMM	TB-MMMMM	TB-NNNNN	TB-NNNNN
Depth Below Grade (ft.)				(5-7)	(10-12)	(20-22)	(0.0-0.3)	(0.3-1.3)	(1.3-2.3)
Sampling Date				7/18/02	7/18/02	7/18/02	7/18/02	7/18/02	7/18/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	ND<0.20	NT	NT	NT	ND<0.20
Acenaphthylene	1,000	2,500	84	NT	ND<0.20	NT	NT	NT	ND<0.20
Anthracene	1,000	2,500	400	NT	ND<0.20	NT	NT	NT	ND<0.20
Benzo[a]anthracene	1	7.8	1	NT	ND<0.20	NT	NT	NT	ND<0.20
Benzo[a]pyrene	1	1	1	NT	ND<0.20	NT	NT	NT	ND<0.20
Benzo[b]fluoranthene	1	7.8	1	NT	ND<0.20	NT	NT	NT	ND<0.20
Benzo[g,h,i]perylene	1,000	2,500	42	NT	ND<0.20	NT	NT	NT	ND<0.20
Benzo[k]fluoranthene	8.4	78	1	NT	ND<0.20	NT	NT	NT	ND<0.20
Chrysene	84	780	1	NT	ND<0.20	NT	NT	NT	ND<0.20
Dibenz[a,h]anthracene	1	1	1	NT	ND<0.20	NT	NT	NT	ND<0.20
Fluoranthene	1,000	2,500	56	NT	ND<0.20	NT	NT	NT	ND<0.20
Fluorene	1,000	2,500	56	NT	ND<0.20	NT	NT	NT	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	ND<0.20	NT	NT	NT	ND<0.20
Naphthalene	1,000	2,500	56	NT	ND<0.20	NT	NT	NT	ND<0.20
Phenanthrene	1,000	2,500	40	NT	ND<0.20	NT	NT	NT	ND<0.20
Pyrene	1,000	2,500	40	NT	ND<0.20	NT	NT	NT	ND<0.20
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Benzene	21	200	0.2	NT	NT	NT	NT	NT	NT
sec-Butylbenzene	500	1,000	14	NT	NT	NT	NT	NT	NT
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	NT	NT
Tetrachloroethene	12	110	1	NT	NT	NT	NT	NT	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-MMMMM	TB-MMMMM	TB-MMMMM	TB-NNNNN	TB-NNNNN
Depth Below Grade (ft.)					(5-7)	(10-12)	(20-22)	(0.0-0.3)	(0.3-1.3)
Sampling Date					7/18/02	7/18/02	7/18/02	7/18/02	7/18/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Toluene	500	1,000	67	NT	NT	NT	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1260	1	10	NA	ND<0.50	ND<0.50	NT	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082									
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT	NT
SPLP Metals									
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT	NT
Copper	NA	NA	13	NT	NT	NT	NT	NT	NT
Lead	NA	NA	0.15	NT	NT	NT	NT	NT	NT
Thallium	NA	NA	0.05	NT	NT	NT	NT	NT	NT
Vanadium	NA	NA	0.50	NT	NT	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	NT	NT	NT
Arsenic	10	10	NA	1.2	ND<1.0	3.0	NT	NT	ND<1.0
Barium	4,700	140,000	NA	NT	NT	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	NT	NT	NT	NT
Lead	500	1,000	NA	NT	NT	NT	NT	NT	NT
Mercury	20	610	NA	NT	NT	NT	NT	NT	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB Area	TB-MMMMM	TB-MMMMM	TB-MMMMM	TB-NNNNN	TB-NNNNN	TB-NNNNN
Depth Below Grade (ft.)				(5-7)	(10-12)	(20-22)	(0.0-0.3)	(0.3-1.3)	(1.3-2.3)
Sampling Date				7/18/02	7/18/02	7/18/02	7/18/02	7/18/02	7/18/02
Total Metals									
Nickel	1,400	7,500	NA	NT	NT	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	NT	NT
Cyanide (Total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	ND<50	NT	NT	NT

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.
Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB Area	TB-NNNNN	TB-NNNNN	TB-OOOOO	TB-OOOOO	TB-OOOOO	TB-OOOOO
Depth Below Grade (ft.)				(2.3-4.3)	(5-7)	(0.0-0.3)	(0.3-1.3)	(1.3-2.3)	(2.3-4.3)
Sampling Date				7/18/02	7/18/02	7/18/02	7/18/02	7/18/02	7/18/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	ND<0.20	NT	NT	NT	0.45	ND<1.0
Acenaphthylene	1,000	2,500	84	ND<0.20	NT	NT	NT	ND<0.20	ND<1.0
Anthracene	1,000	2,500	400	ND<0.20	NT	NT	NT	1.9	ND<1.0
Benzo[a]anthracene	1	7.8	1	ND<0.20	NT	NT	NT	3.5	1.3
Benzo[a]pyrene	1	1	1	ND<0.20	NT	NT	NT	3.2	1.8
Benzo[b]fluoranthene	1	7.8	1	ND<0.20	NT	NT	NT	3.8	2.1
Benzo[g,h,i]perylene	1,000	2,500	42	ND<0.20	NT	NT	NT	2.9	1.9
Benzo[k]fluoranthene	8.4	78	1	ND<0.20	NT	NT	NT	1.4	ND<1.0
Chrysene	84	780	1	ND<0.20	NT	NT	NT	3.7	1.6
Dibenz[a,h]anthracene	1	1	1	ND<0.20	NT	NT	NT	0.67	ND<1.0
Fluoranthene	1,000	2,500	56	0.25	NT	NT	NT	7.5	2.2
Fluorene	1,000	2,500	56	ND<0.20	NT	NT	NT	0.52	ND<1.0
Indeno[1,2,3-cd]pyrene	1	7.8	1	ND<0.20	NT	NT	NT	3.0	1.9
Naphthalene	1,000	2,500	56	ND<0.20	NT	NT	NT	ND<0.20	ND<1.0
Phenanthrene	1,000	2,500	40	ND<0.20	NT	NT	NT	6.2	ND<1.0
Pyrene	1,000	2,500	40	0.23	NT	NT	NT	6.1	2.4
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Benzene	21	200	0.2	NT	NT	NT	NT	NT	ND<0.001
sec-Butylbenzene	500	1,000	14	NT	NT	NT	NT	NT	ND<0.005
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	NT	ND<0.005
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	NT	ND<0.005
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	NT	ND<0.005
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	ND<0.005
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	NT	ND<0.005
Tetrachloroethene	12	110	1	NT	NT	NT	NT	NT	ND<0.005

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-NNNNN	TB-NNNNN	TB-00000	TB-00000	TB-00000	TB-00000
Depth Below Grade (ft.)			GB Area	(2.3-4.3)	(5-7)	(0.0-0.3)	(0.3-1.3)	(1.3-2.3)	(2.3-4.3)
Sampling Date				7/18/02	7/18/02	7/18/02	7/18/02	7/18/02	7/18/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Toluene	500	1,000	67	NT	NT	NT	NT	NT	ND<0.005
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	NT	ND<0.005
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	ND<0.005
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	ND<0.005
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	NT	ND<0.005
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082									
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT	NT
SPLP Metals									
Arsenic	NA	NA	0.5	NT	NT	NT	ND<0.004	ND<0.004	0.02
Barium	NA	NA	10	NT	NT	NT	0.34	0.26	0.96
Copper	NA	NA	13	NT	NT	NT	0.087	ND<0.04	ND<0.04
Lead	NA	NA	0.15	NT	NT	NT	ND<0.013	ND<0.013	0.039
Thallium	NA	NA	0.05	NT	NT	NT	ND<0.005	ND<0.005	ND<0.005
Vanadium	NA	NA	0.50	NT	NT	NT	ND<0.05	ND<0.05	1.5
Zinc	NA	NA	50	NT	NT	NT	0.18	0.11	0.47
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	ND<2.0	ND<2.0	ND<2.0
Arsenic	10	10	NA	ND<1.0	1.9	NT	ND<1.0	ND<1.0	5.8
Barium	4,700	140,000	NA	NT	NT	NT	21	20	23
Chromium	100*	100*	NA	NT	NT	NT	6.5	5.7	7.5
Copper	2,500	76,000	NA	NT	NT	NT	37	21	44
Lead	500	1,000	NA	NT	NT	NT	7.9	18	18
Mercury	20	610	NA	NT	NT	NT	ND<0.20	ND<0.20	ND<0.20

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-NNNNN	TB-NNNNN	TB-OOOOO	TB-OOOOO	TB-OOOOO	TB-OOOOO
Depth Below Grade (ft.)			GB Area	(2.3-4.3)	(5-7)	(0.0-0.3)	(0.3-1.3)	(1.3-2.3)	(2.3-4.3)
Sampling Date				7/18/02	7/18/02	7/18/02	7/18/02	7/18/02	7/18/02
Total Metals									
Nickel	1,400	7,500	NA	NT	NT	NT	10	6.3	21
Selenium	340	10,000	NA	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0
Vanadium	470	14,000	NA	NT	NT	NT	52	28	220
Zinc	20,000	610,000	NA	NT	NT	NT	19	19	31
Cyanide (Total)	1,400	41,000	NA	NT	NT	NT	NT	NT	ND<5.0
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	ND<50	NT	NT	NT	NT	167

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.

Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Table South.1

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-00000	TB-00000	TB-00000	TB-PPPPP/ MW-N	TB-PPPPP/ MW-N	TB-PPPPP/ MW-N
Depth Below Grade (ft.)			GB Area	(5-7)	(10-12)	(15-16)	(0.0-0.3)	(0.3-1.3)	(2.3-4.3)
Sampling Date				7/18/02	7/18/02	7/18/02	7/19/02	7/19/02	7/19/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	ND<1.0	ND<1.0	ND<1.0	NT	ND<0.20	ND<0.20
Acenaphthylene	1,000	2,500	84	1.5	ND<1.0	ND<1.0	NT	ND<0.20	ND<0.20
Anthracene	1,000	2,500	400	1.1	1.0	ND<1.0	NT	ND<0.20	ND<0.20
Benzo[a]anthracene	1	7.8	1	2.9	5.3	ND<1.0	NT	0.50	0.61
Benzo[a]pyrene	1	1	1	3.8	7.2	ND<1.0	NT	0.64	0.88
Benzo[b]fluoranthene	1	7.8	1	3.5	7.3	ND<1.0	NT	0.80	1.1
Benzo[g,h,i]perylene	1,000	2,500	42	3.4	4.2	ND<1.0	NT	0.39	0.52
Benzo[k]fluoranthene	8.4	78	1	1.9	3.6	ND<1.0	NT	0.36	0.47
Chrysene	84	780	1	3.8	5.3	ND<1.0	NT	0.52	0.72
Dibenz[a,h]anthracene	1	1	1	ND<1.0	1.1	ND<1.0	NT	ND<0.20	ND<0.20
Fluoranthene	1,000	2,500	56	3.2	6.9	1.2	NT	0.85	1.2
Fluorene	1,000	2,500	56	ND<1.0	ND<1.0	ND<1.0	NT	ND<0.20	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	2.8	4.8	ND<1.0	NT	0.37	0.55
Naphthalene	1,000	2,500	56	ND<1.0	ND<1.0	ND<1.0	NT	ND<0.20	ND<0.20
Phenanthrene	1,000	2,500	40	1.1	2.5	ND<1.0	NT	0.32	0.44
Pyrene	1,000	2,500	40	6.8	16	2.9	NT	0.88	1.1
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Benzene	21	200	0.2	ND<0.001	ND<0.001	ND<0.001	NT	NT	NT
sec-Butylbenzene	500	1,000	14	ND<0.005	ND<0.005	ND<0.005	NT	NT	NT
Ethylbenzene	500	1,000	10.1	ND<0.005	ND<0.005	ND<0.005	NT	NT	NT
Isopropylbenzene	500	1,000	132	ND<0.005	ND<0.005	ND<0.005	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	ND<0.005	ND<0.005	ND<0.005	NT	NT	NT
Naphthalene	1,000	2,500	56	ND<0.005	ND<0.005	ND<0.005	NT	NT	NT
n-Propylbenzene	500	1,000	14	ND<0.005	ND<0.005	ND<0.005	NT	NT	NT
Tetrachloroethene	12	110	1	ND<0.005	ND<0.005	ND<0.005	NT	NT	NT

Table South.1

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-00000	TB-00000	TB-00000	TB-PPPPP/ MW-N	TB-PPPPP/ MW-N	TB-PPPPP/ MW-N
Depth Below Grade (ft.)			GB Area	(5-7)	(10-12)	(15-16)	(0.0-0.3)	(0.3-1.3)	(2.3-4.3)
Sampling Date				7/18/02	7/18/02	7/18/02	7/19/02	7/19/02	7/19/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Toluene	500	1,000	67	ND<0.005	ND<0.005	ND<0.005	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	ND<0.005	ND<0.005	ND<0.005	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	ND<0.005	ND<0.005	ND<0.005	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	ND<0.005	ND<0.005	ND<0.005	NT	NT	NT
Xylenes (total)	500	1,000	19.5	ND<0.005	ND<0.005	ND<0.005	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1260	1	10	NA	9.7	0.71	ND<0.50	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082									
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT	NT
SPLP Metals									
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT	ND<0.004
Barium	NA	NA	10	NT	NT	NT	NT	NT	0.45
Copper	NA	NA	13	NT	NT	NT	NT	NT	ND<0.04
Lead	NA	NA	0.15	NT	NT	NT	NT	NT	ND<0.013
Thallium	NA	NA	0.05	NT	NT	NT	NT	NT	ND<0.005
Vanadium	NA	NA	0.50	NT	NT	NT	NT	NT	ND<0.05
Zinc	NA	NA	50	NT	NT	NT	NT	NT	0.22
Total Metals									
Antimony	27	8,200	NA	ND<2.0	NT	NT	NT	NT	2.5
Arsenic	10	10	NA	3.1	1.0	NT	NT	1.5	8.3
Barium	4,700	140,000	NA	8.0	NT	NT	NT	NT	61
Chromium	100*	100*	NA	5.2	NT	NT	NT	NT	9.5
Copper	2,500	76,000	NA	46	NT	NT	NT	NT	76
Lead	500	1,000	NA	35	NT	NT	NT	NT	170
Mercury	20	610	NA	ND<0.20	NT	NT	NT	NT	0.30

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB Area	TB-00000	TB-00000	TB-00000	TB-PPPPP/ MW-N	TB-PPPPP/ MW-N	TB-PPPPP/ MW-N
Depth Below Grade (ft.)				(5-7)	(10-12)	(15-16)	(0.0-0.3)	(0.3-1.3)	(2.3-4.3)
Sampling Date				7/18/02	7/18/02	7/18/02	7/19/02	7/19/02	7/19/02
Total Metals									
Nickel	1,400	7,500	NA	7.9	NT	NT	NT	NT	6.8
Selenium	340	10,000	NA	ND<1.0	NT	NT	NT	NT	ND<1.0
Vanadium	470	14,000	NA	130	NT	NT	NT	NT	14
Zinc	20,000	610,000	NA	34	NT	NT	NT	NT	130
Cyanide (Total)	1,400	41,000	NA	ND<5.0	ND<5.0	ND<5.0	NT	NT	ND<5.0
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	1,860	553	NT	NT	NT	116

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.

Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Ta South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-PPPPP/ MW-N	TB-PPPPP/ MW-N	TB-PPPPP/ MW-N	TB-PPPPP/ MW-N	TB-PPPPP/ MW-N	TB-QQQQQ
Depth Below Grade (ft.)			GB Area	(5-7)	(10-12)	(15-17)	(20-22)	(25-27)	(0.0-0.3)
Sampling Date				7/19/02	7/19/02	7/19/02	7/19/02	7/19/02	7/19/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	6.8	1.6	1.3	NT	NT	NT
Acenaphthylene	1,000	2,500	84	5.5	5.0	2.4	NT	NT	NT
Anthracene	1,000	2,500	400	31	12	7.2	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	63	23	14	NT	NT	NT
Benzo[a]pyrene	1	1	1	56	25	15	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	65	29	19	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	27	12	6.7	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	36	14	8.5	NT	NT	NT
Chrysene	84	780	1	56	22	14	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	9.2	1.2	1.9	NT	NT	NT
Fluoranthene	1,000	2,500	56	130	59	37	NT	NT	NT
Fluorene	1,000	2,500	56	13	4.4	2.8	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	33	14	7.9	NT	NT	NT
Naphthalene	1,000	2,500	56	5.9	3.6	2.2	NT	NT	NT
Phenanthrene	1,000	2,500	40	110	49	30	NT	NT	NT
Pyrene	1,000	2,500	40	100	49	30	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Benzene	21	200	0.2	ND<0.001	NT	ND<0.001	NT	NT	NT
sec-Butylbenzene	500	1,000	14	ND<0.005	NT	ND<0.005	NT	NT	NT
Ethylbenzene	500	1,000	10.1	ND<0.005	NT	ND<0.005	NT	NT	NT
Isopropylbenzene	500	1,000	132	ND<0.005	NT	ND<0.005	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	ND<0.005	NT	ND<0.005	NT	NT	NT
Naphthalene	1,000	2,500	56	0.14	NT	0.096	NT	NT	NT
n-Propylbenzene	500	1,000	14	ND<0.005	NT	ND<0.005	NT	NT	NT
Tetrachloroethene	12	110	1	0.0081	NT	ND<0.005	NT	NT	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-PPPPP/ MW-N	TB-PPPPP/ MW-N	TB-PPPPP/ MW-N	TB-PPPPP/ MW-N	TB-PPPPP/ MW-N	TB-QQQQQ
Depth Below Grade (ft.)			GB Area	(5-7)	(10-12)	(15-17)	(20-22)	(25-27)	(0.0-0.3)
Sampling Date				7/19/02	7/19/02	7/19/02	7/19/02	7/19/02	7/19/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Toluene	500	1,000	67	ND<0.005	NT	ND<0.005	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	ND<0.005	NT	ND<0.005	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	ND<0.005	NT	ND<0.005	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	ND<0.005	NT	ND<0.005	NT	NT	NT
Xylenes (total)	500	1,000	19.5	ND<0.005	NT	ND<0.005	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082									
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT	NT
SPLP Metals									
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT	NT
Copper	NA	NA	13	NT	NT	NT	NT	NT	NT
Lead	NA	NA	0.15	NT	NT	NT	NT	NT	NT
Thallium	NA	NA	0.05	NT	NT	NT	NT	NT	NT
Vanadium	NA	NA	0.50	NT	NT	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	NT	NT	NT
Arsenic	10	10	NA	8.6	4.5	5.1	ND<1.0	3.3	NT
Barium	4,700	140,000	NA	NT	NT	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	NT	NT	NT	NT
Lead	500	1,000	NA	NT	NT	NT	NT	NT	NT
Mercury	20	610	NA	NT	NT	NT	NT	NT	NT

Table South.1

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-PPPPP/ MW-N	TB-PPPPP/ MW-N	TB-PPPPP/ MW-N	TB-PPPPP/ MW-N	TB-PPPPP/ MW-N	TB-QQQQQ
Depth Below Grade (ft.)			GB Area	(5-7)	(10-12)	(15-17)	(20-22)	(25-27)	(0.0-0.3)
Sampling Date				7/19/02	7/19/02	7/19/02	7/19/02	7/19/02	7/19/02
Total Metals									
Nickel	1,400	7,500	NA	NT	NT	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	NT	NT
Cyanide (Total)	1,400	41,000	NA	ND<5.0	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	1,037	NT	NT	NT	NT	NT

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.

Units are milligrams per liter (mg/L).

* = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Table South.1

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-QQQQQ	TB-QQQQQ	TB-QQQQQ	TB-QQQQQ	TB-QQQQQ	TB-RRRRR
Depth Below Grade (ft.)			GB Area	(0.3-1.3)	(1.3-2.3)	(2.3-4.3)	(5-7)	(10-12)	(0.0-0.3)
Sampling Date				7/19/02	7/19/02	7/19/02	7/19/02	7/19/02	7/19/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	ND<0.20	NT	ND<0.20	ND<0.20	ND<1.0	NT
Acenaphthylene	1,000	2,500	84	ND<0.20	NT	ND<0.20	ND<0.20	ND<1.0	NT
Anthracene	1,000	2,500	400	0.30	NT	ND<0.20	0.29	ND<1.0	NT
Benzo[a]anthracene	1	7.8	1	2.7	NT	0.31	1.0	1.1	NT
Benzo[a]pyrene	1	1	1	3.8	NT	0.39	1.1	2.8	NT
Benzo[b]fluoranthene	1	7.8	1	5.2	NT	0.52	1.3	1.4	NT
Benzo[g,h,i]perylene	1,000	2,500	42	1.9	NT	ND<0.20	0.50	2.5	NT
Benzo[k]fluoranthene	8.4	78	1	2.5	NT	0.24	0.62	ND<1.0	NT
Chrysene	84	780	1	3.4	NT	0.37	0.97	1.8	NT
Dibenz[a,h]anthracene	1	1	1	ND<0.20	NT	ND<0.20	ND<0.20	ND<1.0	NT
Fluoranthene	1,000	2,500	56	5.8	NT	0.77	2.1	ND<1.0	NT
Fluorene	1,000	2,500	56	ND<0.20	NT	ND<0.20	ND<0.20	ND<1.0	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	2.2	NT	0.21	0.54	1.1	NT
Naphthalene	1,000	2,500	56	ND<0.20	NT	ND<0.20	ND<0.20	ND<1.0	NT
Phenanthrene	1,000	2,500	40	1.8	NT	0.36	0.95	ND<1.0	NT
Pyrene	1,000	2,500	40	5.2	NT	0.69	1.8	4.0	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Benzene	21	200	0.2	NT	ND<0.001	NT	ND<0.001	ND<0.001	NT
sec-Butylbenzene	500	1,000	14	NT	ND<0.005	NT	ND<0.005	ND<0.005	NT
Ethylbenzene	500	1,000	10.1	NT	ND<0.005	NT	ND<0.005	ND<0.005	NT
Isopropylbenzene	500	1,000	132	NT	ND<0.005	NT	ND<0.005	ND<0.005	NT
4-Isopropyltoluene	500	1,000	41.8	NT	ND<0.005	NT	ND<0.005	ND<0.005	NT
Naphthalene	1,000	2,500	56	NT	0.20	NT	0.0052	ND<0.005	NT
n-Propylbenzene	500	1,000	14	NT	ND<0.005	NT	ND<0.005	ND<0.005	NT
Tetrachloroethene	12	110	1	NT	ND<0.005	NT	ND<0.005	ND<0.005	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-QQQQQ	TB-QQQQQ	TB-QQQQQ	TB-QQQQQ	TB-QQQQQ	TB-RRRRR
Depth Below Grade (ft.)			GB Area	(0.3-1.3)	(1.3-2.3)	(2.3-4.3)	(5-7)	(10-12)	(0.0-0.3)
Sampling Date				7/19/02	7/19/02	7/19/02	7/19/02	7/19/02	7/19/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Toluene	500	1,000	67	NT	ND<0.005	NT	ND<0.005	ND<0.005	NT
1,1,1-Trichloroethane	500	1,000	40	NT	ND<0.005	NT	ND<0.005	ND<0.005	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	ND<0.005	NT	ND<0.005	ND<0.005	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	ND<0.005	NT	ND<0.005	ND<0.005	NT
Xylenes (total)	500	1,000	19.5	NT	ND<0.005	NT	ND<0.005	ND<0.005	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082									
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT	NT
SPLP Metals									
Arsenic	NA	NA	0.5	NT	NT	NT	ND<0.004	NT	NT
Barium	NA	NA	10	NT	NT	NT	0.37	NT	NT
Copper	NA	NA	13	NT	NT	NT	ND<0.04	NT	NT
Lead	NA	NA	0.15	NT	NT	NT	ND<0.013	NT	NT
Thallium	NA	NA	0.05	NT	NT	NT	ND<0.005	NT	NT
Vanadium	NA	NA	0.50	NT	NT	NT	ND<0.05	NT	NT
Zinc	NA	NA	50	NT	NT	NT	0.15	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	2.9	NT	NT
Arsenic	10	10	NA	4.0	1.3	2.5	4.1	ND<1.0	NT
Barium	4,700	140,000	NA	NT	NT	NT	18	NT	NT
Chromium	100*	100*	NA	NT	NT	NT	15	NT	NT
Copper	2,500	76,000	NA	NT	NT	NT	70	NT	NT
Lead	500	1,000	NA	NT	NT	NT	24	NT	NT
Mercury	20	610	NA	NT	NT	NT	ND<0.20	NT	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-QQQQQ	TB-QQQQQ	TB-QQQQQ	TB-QQQQQ	TB-QQQQQ	TB-RRRRR
Depth Below Grade (ft.)			GB Area	(0.3-1.3)	(1.3-2.3)	(2.3-4.3)	(5-7)	(10-12)	(0.0-0.3)
Sampling Date				7/19/02	7/19/02	7/19/02	7/19/02	7/19/02	7/19/02
Total Metals									
Nickel	1,400	7,500	NA	NT	NT	NT	19	NT	NT
Selenium	340	10,000	NA	NT	NT	NT	1.1	NT	NT
Vanadium	470	14,000	NA	NT	NT	NT	18	NT	NT
Zinc	20,000	610,000	NA	NT	NT	NT	37	NT	NT
Cyanide (Total)	1,400	41,000	NA	NT	NT	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	ND<50	NT	ND<50	ND<50	884	NT

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.

Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.


Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-RRRRR	TB-RRRRR	TB-RRRRR	TB-RRRRR	TB-RRRRR	TB-RRRRR
Depth Below Grade (ft.)			GB Area	(0.3-1.3)	(1.3-2.3)	(2.3-4.3)	(5-7)	(15-17)	(20-22)
Sampling Date				7/19/02	7/19/02	7/19/02	7/19/02	7/19/02	7/19/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	ND<0.20	NT	ND<0.20	NT	NT	NT
Acenaphthylene	1,000	2,500	84	ND<0.20	NT	ND<0.20	NT	NT	NT
Anthracene	1,000	2,500	400	ND<0.20	NT	ND<0.20	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	ND<0.20	NT	ND<0.20	NT	NT	NT
Benzo[a]pyrene	1	1	1	ND<0.20	NT	ND<0.20	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	ND<0.20	NT	ND<0.20	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	ND<0.20	NT	ND<0.20	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	ND<0.20	NT	ND<0.20	NT	NT	NT
Chrysene	84	780	1	ND<0.20	NT	ND<0.20	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	ND<0.20	NT	ND<0.20	NT	NT	NT
Fluoranthene	1,000	2,500	56	ND<0.20	NT	ND<0.20	NT	NT	NT
Fluorene	1,000	2,500	56	ND<0.20	NT	ND<0.20	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	ND<0.20	NT	ND<0.20	NT	NT	NT
Naphthalene	1,000	2,500	56	ND<0.20	NT	ND<0.20	NT	NT	NT
Phenanthrene	1,000	2,500	40	ND<0.20	NT	ND<0.20	NT	NT	NT
Pyrene	1,000	2,500	40	ND<0.20	NT	ND<0.20	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Benzene	21	200	0.2	NT	NT	ND<0.001	ND<0.001	ND<0.001	NT
sec-Butylbenzene	500	1,000	14	NT	NT	ND<0.005	ND<0.005	ND<0.005	NT
Ethylbenzene	500	1,000	10.1	NT	NT	ND<0.005	ND<0.005	ND<0.005	NT
Isopropylbenzene	500	1,000	132	NT	NT	ND<0.005	ND<0.005	ND<0.005	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	ND<0.005	ND<0.005	ND<0.005	NT
Naphthalene	1,000	2,500	56	NT	NT	ND<0.005	ND<0.005	ND<0.005	NT
n-Propylbenzene	500	1,000	14	NT	NT	ND<0.005	ND<0.005	ND<0.005	NT
Tetrachloroethene	12	110	1	NT	NT	ND<0.005	ND<0.005	ND<0.005	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-RRRRR	TB-RRRRR	TB-RRRRR	TB-RRRRR	TB-RRRRR	TB-RRRRR
Depth Below Grade (ft.)			GB Area	(0.3-1.3)	(1.3-2.3)	(2.3-4.3)	(5-7)	(15-17)	(20-22)
Sampling Date				7/19/02	7/19/02	7/19/02	7/19/02	7/19/02	7/19/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Toluene	500	1,000	67	NT	NT	ND<0.005	ND<0.005	ND<0.005	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	ND<0.005	ND<0.005	ND<0.005	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.005	ND<0.005	ND<0.005	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.005	ND<0.005	ND<0.005	NT
Xylenes (total)	500	1,000	19.5	NT	NT	ND<0.005	ND<0.005	ND<0.005	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082									
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT	NT
SPLP Metals									
Arsenic	NA	NA	0.5	NT	ND<0.004	NT	NT	NT	NT
Barium	NA	NA	10	NT	0.70	NT	NT	NT	NT
Copper	NA	NA	13	NT	ND<0.04	NT	NT	NT	NT
Lead	NA	NA	0.15	NT	ND<0.013	NT	NT	NT	NT
Thallium	NA	NA	0.05	NT	ND<0.005	NT	NT	NT	NT
Vanadium	NA	NA	0.50	NT	ND<0.05	NT	NT	NT	NT
Zinc	NA	NA	50	NT	0.26	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	ND<2.0	NT	NT	NT	NT
Arsenic	10	10	NA	ND<1.0	ND<1.0	ND<1.0	ND<1.0	3.1	3.3
Barium	4,700	140,000	NA	NT	19	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	5.2	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	7.5	NT	NT	NT	NT
Lead	500	1,000	NA	NT	5.0	NT	NT	NT	NT
Mercury	20	610	NA	NT	ND<0.20	NT	NT	NT	NT

Table South.1

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial	GB Area	TB-RRRRR	TB-RRRRR	TB-RRRRR	TB-RRRRR	TB-RRRRR	TB-RRRRR
Depth Below Grade (ft.)				(0.3-1.3)	(1.3-2.3)	(2.3-4.3)	(5-7)	(15-17)	(20-22)
Sampling Date				7/19/02	7/19/02	7/19/02	7/19/02	7/19/02	7/19/02
Total Metals									
Nickel	1,400	7,500	NA	NT	3.6	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	ND<1.0	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	16	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	11	NT	NT	NT	NT
Cyanide (Total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	ND<50	NT	ND<50	ND<50	NT	NT

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.
Units are milligrams per liter (mg/L).

* = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-SSSSS/ MW-O	TB-SSSSS/ MW-O	TB-SSSSS/ MW-O	TB-SSSSS/ MW-O	TB-SSSSS/ MW-O	TB-TTTTT
Depth Below Grade (ft.)			GB Area	(0.0-0.3)	(0.3-1.3)	(1.3-2.3)	(2.3-4.3)	(5-7)	(0.0-0.3)
Sampling Date				7/19/02	7/19/02	7/19/02	7/19/02	7/19/02	7/19/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	NT	NT	NT	ND<0.20
Acenaphthylene	1,000	2,500	84	NT	NT	NT	NT	NT	ND<0.20
Anthracene	1,000	2,500	400	NT	NT	NT	NT	NT	ND<0.20
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	NT	NT	ND<0.20
Benzo[a]pyrene	1	1	1	NT	NT	NT	NT	NT	ND<0.20
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	NT	NT	ND<0.20
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	NT	NT	ND<0.20
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	NT	NT	ND<0.20
Chrysene	84	780	1	NT	NT	NT	NT	NT	ND<0.20
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	NT	NT	ND<0.20
Fluoranthene	1,000	2,500	56	NT	NT	NT	NT	NT	ND<0.20
Fluorene	1,000	2,500	56	NT	NT	NT	NT	NT	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	NT	NT	ND<0.20
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	ND<0.20
Phenanthrene	1,000	2,500	40	NT	NT	NT	NT	NT	ND<0.20
Pyrene	1,000	2,500	40	NT	NT	NT	NT	NT	ND<0.20
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Benzene	21	200	0.2	NT	NT	ND<0.001	ND<0.001	NT	NT
sec-Butylbenzene	500	1,000	14	NT	NT	ND<0.005	ND<0.005	NT	NT
Ethylbenzene	500	1,000	10.1	NT	NT	ND<0.005	ND<0.005	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	ND<0.005	ND<0.005	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	ND<0.005	ND<0.005	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	ND<0.005	ND<0.005	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	ND<0.005	ND<0.005	NT	NT
Tetrachloroethene	12	110	1	NT	NT	ND<0.005	ND<0.005	NT	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-SSSSS/ MW-O	TB-SSSSS/ MW-O	TB-SSSSS/ MW-O	TB-SSSSS/ MW-O	TB-SSSSS/ MW-O	TB-TTTTT
Depth Below Grade (ft.)			GB Area	(0.0-0.3)	(0.3-1.3)	(1.3-2.3)	(2.3-4.3)	(5-7)	(0.0-0.3)
Sampling Date				7/19/02	7/19/02	7/19/02	7/19/02	7/19/02	7/19/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Toluene	500	1,000	67	NT	NT	ND<0.005	ND<0.005	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	ND<0.005	ND<0.005	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.005	ND<0.005	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.005	ND<0.005	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	ND<0.005	ND<0.005	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082									
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT	NT
SPLP Metals									
Arsenic	NA	NA	0.5	NT	ND<0.004	NT	NT	NT	NT
Barium	NA	NA	10	NT	0.54	NT	NT	NT	NT
Copper	NA	NA	13	NT	ND<0.04	NT	NT	NT	NT
Lead	NA	NA	0.15	NT	ND<0.013	NT	NT	NT	NT
Thallium	NA	NA	0.05	NT	ND<0.005	NT	NT	NT	NT
Vanadium	NA	NA	0.50	NT	ND<0.05	NT	NT	NT	NT
Zinc	NA	NA	50	NT	0.21	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	ND<2.0	NT	NT	NT	NT
Arsenic	10	10	NA	NT	ND<1.0	ND<1.0	1.2	ND<1.0	NT
Barium	4,700	140,000	NA	NT	21	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	5.0	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	9.9	NT	NT	NT	NT
Lead	500	1,000	NA	NT	4.6	NT	NT	NT	NT
Mercury	20	610	NA	NT	ND<0.20	NT	NT	NT	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-SSSSS/ MW-O	TB-SSSSS/ MW-O	TB-SSSSS/ MW-O	TB-SSSSS/ MW-O	TB-SSSSS/ MW-O	TB-TTTTT
Depth Below Grade (ft.)			GB Area	(0.0-0.3)	(0.3-1.3)	(1.3-2.3)	(2.3-4.3)	(5-7)	(0.0-0.3)
Sampling Date				7/19/02	7/19/02	7/19/02	7/19/02	7/19/02	7/19/02
Total Metals									
Nickel	1,400	7,500	NA	NT	4.5	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	ND<1.0	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	20	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	14	NT	NT	NT	NT
Cyanide (Total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	ND<50	ND<50	ND<50	NT	NT

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.
Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-TTTTT	TB-TTTTT	TB-TTTTT	TB-TTTTT	TB-UUUUU	TB-UUUUU
Depth Below Grade (ft.)			GB Area	(0.3-1.3)	(1.3-2.3)	(2.3-4.3)	(5-7)	(0.0-0.3)	(0.3-1.3)
Sampling Date				7/19/02	7/19/02	7/19/02	7/19/02	7/22/02	7/22/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	NT	ND<0.20	NT	NT	NT
Acenaphthylene	1,000	2,500	84	NT	NT	ND<0.20	NT	NT	NT
Anthracene	1,000	2,500	400	NT	NT	ND<0.20	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	0.81	NT	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	0.77	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	0.98	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	0.41	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	0.40	NT	NT	NT
Chrysene	84	780	1	NT	NT	0.91	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	ND<0.20	NT	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	1.6	NT	NT	NT
Fluorene	1,000	2,500	56	NT	NT	ND<0.20	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	0.56	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	ND<0.20	NT	NT	NT
Phenanthrene	1,000	2,500	40	NT	NT	1.1	NT	NT	NT
Pyrene	1,000	2,500	40	NT	NT	1.3	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Benzene	21	200	0.2	NT	NT	NT	NT	NT	NT
sec-Butylbenzene	500	1,000	14	NT	NT	NT	NT	NT	NT
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	NT	NT
Tetrachloroethene	12	110	1	NT	NT	NT	NT	NT	NT

Table South.1

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		GB Area	TB-TTTTT	TB-TTTTT	TB-TTTTT	TB-TTTTT	TB-UUUUU
Depth Below Grade (ft.)				(0.3-1.3)	(1.3-2.3)	(2.3-4.3)	(5-7)	(0.0-0.3)	(0.3-1.3)
Sampling Date				7/19/02	7/19/02	7/19/02	7/19/02	7/22/02	7/22/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Toluene	500	1,000	67	NT	NT	NT	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082									
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT	NT
SPLP Metals									
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT	NT
Copper	NA	NA	13	NT	NT	NT	NT	NT	NT
Lead	NA	NA	0.15	NT	NT	NT	NT	NT	NT
Thallium	NA	NA	0.05	NT	NT	NT	NT	NT	NT
Vanadium	NA	NA	0.50	NT	NT	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	NT	NT	NT
Arsenic	10	10	NA	ND<1.0	ND<1.0	ND<1.0	2.1	1.2	1.4
Barium	4,700	140,000	NA	NT	NT	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	NT	NT	NT	NT
Lead	500	1,000	NA	NT	NT	NT	NT	NT	NT
Mercury	20	610	NA	NT	NT	NT	NT	NT	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/Commercial	GB Area	TB-TTTTT	TB-TTTTT	TB-TTTTT	TB-TTTTT	TB-UUUUU	TB-UUUUU
Depth Below Grade (ft.)				(0.3-1.3)	(1.3-2.3)	(2.3-4.3)	(5-7)	(0.0-0.3)	(0.3-1.3)
Sampling Date				7/19/02	7/19/02	7/19/02	7/19/02	7/22/02	7/22/02
Total Metals									
Nickel	1,400	7,500	NA	NT	NT	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	NT	NT
Cyanide (Total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	ND<50	NT	NT	NT

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.

Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-UUUUU	TB-UUUUU	TB-UUUUU	TB-VVVVV	TB-VVVVV	TB-VVVVV
Depth Below Grade (ft.)			GB Area	(1.3-2.3)	(2.3-4.3)	(5-7)	(0.0-0.3)	(0.3-1.8)	(2-3.5)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	ND<0.20	NT	NT	NT	ND<0.20
Acenaphthylene	1,000	2,500	84	NT	ND<0.20	NT	NT	NT	ND<0.20
Anthracene	1,000	2,500	400	NT	ND<0.20	NT	NT	NT	ND<0.20
Benzo[a]anthracene	1	7.8	1	NT	0.30	NT	NT	NT	0.35
Benzo[a]pyrene	1	1	1	NT	0.33	NT	NT	NT	0.45
Benzo[b]fluoranthene	1	7.8	1	NT	0.40	NT	NT	NT	0.63
Benzo[g,h,i]perylene	1,000	2,500	42	NT	ND<0.20	NT	NT	NT	0.25
Benzo[k]fluoranthene	8.4	78	1	NT	0.23	NT	NT	NT	0.31
Chrysene	84	780	1	NT	0.35	NT	NT	NT	0.42
Dibenz[a,h]anthracene	1	1	1	NT	ND<0.20	NT	NT	NT	ND<0.20
Fluoranthene	1,000	2,500	56	NT	0.56	NT	NT	NT	0.59
Fluorene	1,000	2,500	56	NT	ND<0.20	NT	NT	NT	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	ND<0.20	NT	NT	NT	0.28
Naphthalene	1,000	2,500	56	NT	ND<0.20	NT	NT	NT	ND<0.20
Phenanthrene	1,000	2,500	40	NT	0.46	NT	NT	NT	0.27
Pyrene	1,000	2,500	40	NT	0.51	NT	NT	NT	0.58
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Benzene	21	200	0.2	NT	NT	NT	NT	NT	NT
sec-Butylbenzene	500	1,000	14	NT	NT	NT	NT	NT	NT
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	NT	NT
Tetrachloroethene	12	110	1	NT	NT	NT	NT	NT	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-UUUUU	TB-UUUUU	TB-UUUUU	TB-VVVVV	TB-VVVVV	TB-VVVVV
Depth Below Grade (ft.)			GB Area	(1.3-2.3)	(2.3-4.3)	(5-7)	(0.0-0.3)	(0.3-1.8)	(2-3.5)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Toluene	500	1,000	67	NT	NT	NT	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082									
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT	NT
SPLP Metals									
Arsenic	NA	NA	0.5	NT	ND<0.004	NT	NT	NT	NT
Barium	NA	NA	10	NT	0.76	NT	NT	NT	NT
Copper	NA	NA	13	NT	ND<0.04	NT	NT	NT	NT
Lead	NA	NA	0.15	NT	ND<0.013	NT	NT	NT	NT
Thallium	NA	NA	0.05	NT	ND<0.005	NT	NT	NT	NT
Vanadium	NA	NA	0.50	NT	ND<0.05	NT	NT	NT	NT
Zinc	NA	NA	50	NT	0.28	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	ND<2.0	NT	NT	NT	NT
Arsenic	10	10	NA	1.2	1.2	2.2	2.2	1.5	1.4
Barium	4,700	140,000	NA	NT	23	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	8.4	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	22	NT	NT	NT	NT
Lead	500	1,000	NA	NT	16	NT	NT	NT	NT
Mercury	20	610	NA	NT	ND<0.20	NT	NT	NT	NT

Table South.1

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-UUUUU	TB-UUUUU	TB-UUUUU	TB-WWWW	TB-WWWW	TB-WWWW
Depth Below Grade (ft.)			GB Area	(1.3-2.3)	(2.3-4.3)	(5-7)	(0.0-0.3)	(0.3-1.8)	(2-3.5)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
Total Metals									
Nickel	1,400	7,500	NA	NT	7.0	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	ND<1.0	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	26	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	29	NT	NT	NT	NT
Cyanide (Total)	1,400	41,000	NA	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	90	NT	NT	NT	95

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.

Units are milligrams per liter (mg/L).

* = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Table South.1

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		TB-VVVVV	TB-WWWWW	TB-WWWWW	TB-WWWWW	TB-WWWWW
Depth Below Grade (ft.)			GB Area	(5-6.5)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)	(5-7)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)								
Acenaphthene	1,000	2,500	84	NT	NT	NT	ND<1.0	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	ND<1.0	NT
Anthracene	1,000	2,500	400	NT	NT	NT	ND<1.0	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	ND<1.0	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	1.9	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	ND<1.0	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	4.2	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	ND<1.0	NT
Chrysene	84	780	1	NT	NT	NT	ND<1.0	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	ND<1.0	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	ND<1.0	NT
Fluorene	1,000	2,500	56	NT	NT	NT	ND<1.0	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	ND<1.0	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	ND<1.0	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	ND<1.0	NT
Pyrene	1,000	2,500	40	NT	NT	NT	ND<1.0	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Benzene	21	200	0.2	NT	NT	ND<0.001	ND<0.001	0.0074
sec-Butylbenzene	500	1,000	14	NT	NT	ND<0.005	ND<0.005	ND<0.005
Ethylbenzene	500	1,000	10.1	NT	NT	ND<0.005	ND<0.005	ND<0.005
Isopropylbenzene	500	1,000	132	NT	NT	ND<0.005	ND<0.005	ND<0.005
4-Isopropyltoluene	500	1,000	41.8	NT	NT	ND<0.005	ND<0.005	ND<0.005
Naphthalene	1,000	2,500	56	NT	NT	ND<0.005	ND<0.005	ND<0.005
n-Propylbenzene	500	1,000	14	NT	NT	ND<0.005	ND<0.005	ND<0.005
Tetrachloroethene	12	110	1	NT	NT	0.11	0.03	0.018

Table South.1

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		GB Area	TB-VVVVV	TB-WWWWW	TB-WWWWW	TB-WWWWW
Depth Below Grade (ft.)				(5-6.5)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)	(5-7)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Toluene	500	1,000	67	NT	NT	ND<0.005	ND<0.005	0.0085
1,1,1-Trichloroethane	500	1,000	40	NT	NT	0.02	0.014	0.009
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.005	ND<0.005	ND<0.005
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.005	ND<0.005	ND<0.005
Xylenes (total)	500	1,000	19.5	NT	NT	ND<0.005	ND<0.005	ND<0.005
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)								
PCB-1260	1	10	NA	ND<0.50	1.0	53	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082								
PCB-1260	NA	NA	0.005	NT	ND<0.0005	ND<0.0005	NT	NT
SPLP Metals								
Arsenic	NA	NA	0.5	NT	NT	0.014	NT	NT
Barium	NA	NA	10	NT	NT	0.78	NT	NT
Copper	NA	NA	13	NT	NT	0.051	NT	NT
Lead	NA	NA	0.15	NT	NT	0.06	NT	NT
Thallium	NA	NA	0.05	NT	NT	0.0064	NT	NT
Vanadium	NA	NA	0.50	NT	NT	0.12	NT	NT
Zinc	NA	NA	50	NT	NT	0.42	NT	NT
Total Metals								
Antimony	27	8,200	NA	NT	NT	2.7	NT	NT
Arsenic	10	10	NA	ND<1.0	NT	2.9	4.5	5.8
Barium	4,700	140,000	NA	NT	NT	21	NT	NT
Chromium	100*	100*	NA	NT	NT	9.9	NT	NT
Copper	2,500	76,000	NA	NT	NT	51	NT	NT
Lead	500	1,000	NA	NT	NT	81	NT	NT
Mercury	20	610	NA	NT	NT	1.4	NT	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		TB-VVVVV	TB-WWWWW	TB-WWWWW	TB-WWWWW	TB-WWWWW
Depth Below Grade (ft.)			GB Area	(5-6.5)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)	(5-7)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
Total Metals								
Nickel	1,400	7,500	NA	NT	NT	11	NT	NT
Selenium	340	10,000	NA	NT	NT	1.1	NT	NT
Vanadium	470	14,000	NA	NT	NT	32	NT	NT
Zinc	20,000	610,000	NA	NT	NT	77	NT	NT
Cyanide (Total)	1,400	41,000	NA	NT	NT	NT	ND<5.0	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	330	345	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.
Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- ☐ = Concentration exceeds associated criterion.

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		TB-XXXXX	TB-XXXXX	TB-XXXXX	TB-XXXXX	TB-XXXXX
Depth Below Grade (ft.)			GB Area	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)	(5-7)	(10-12)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)								
Acenaphthene	1,000	2,500	84	NT	ND<0.20	ND<0.20	NT	NT
Acenaphthylene	1,000	2,500	84	NT	2.0	ND<0.20	NT	NT
Anthracene	1,000	2,500	400	NT	0.64	ND<0.20	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	2.6	ND<0.20	NT	NT
Benzo[a]pyrene	1	1	1	NT	4.1	ND<0.20	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	4.5	ND<0.20	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	2.5	ND<0.20	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	2.0	ND<0.20	NT	NT
Chrysene	84	780	1	NT	3.0	ND<0.20	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	0.63	ND<0.20	NT	NT
Fluoranthene	1,000	2,500	56	NT	2.8	0.23	NT	NT
Fluorene	1,000	2,500	56	NT	0.21	ND<0.20	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	2.3	ND<0.20	NT	NT
Naphthalene	1,000	2,500	56	NT	0.79	ND<0.20	NT	NT
Phenanthrene	1,000	2,500	40	NT	1.2	ND<0.20	NT	NT
Pyrene	1,000	2,500	40	NT	5.8	0.27	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Benzene	21	200	0.2	NT	ND<0.001	ND<0.001	NT	ND<0.001
sec-Butylbenzene	500	1,000	14	NT	ND<0.005	ND<0.005	NT	ND<0.005
Ethylbenzene	500	1,000	10.1	NT	ND<0.005	ND<0.005	NT	ND<0.005
Isopropylbenzene	500	1,000	132	NT	ND<0.005	ND<0.005	NT	ND<0.005
4-Isopropyltoluene	500	1,000	41.8	NT	ND<0.005	ND<0.005	NT	ND<0.005
Naphthalene	1,000	2,500	56	NT	ND<0.005	ND<0.005	NT	ND<0.005
n-Propylbenzene	500	1,000	14	NT	ND<0.005	ND<0.005	NT	ND<0.005
Tetrachloroethene	12	110	1	NT	0.012	0.0051	NT	ND<0.005

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial	GB Area	TB-XXXXX	TB-XXXXX	TB-XXXXX	TB-XXXXX	TB-XXXXX
Depth Below Grade (ft.)				(0.0-0.3)	(0.3-2.3)	(2.3-4.3)	(5-7)	(10-12)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Toluene	500	1,000	67	NT	ND<0.005	ND<0.005	NT	ND<0.005
1,1,1-Trichloroethane	500	1,000	40	NT	ND<0.005	ND<0.005	NT	ND<0.005
1,2,4-Trimethylbenzene	500	1,000	70	NT	ND<0.005	ND<0.005	NT	ND<0.005
1,3,5-Trimethylbenzene	500	1,000	70	NT	ND<0.005	ND<0.005	NT	ND<0.005
Xylenes (total)	500	1,000	19.5	NT	ND<0.005	ND<0.005	NT	ND<0.005
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)								
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082								
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT
SPLP Metals								
Arsenic	NA	NA	0.5	NT	NT	ND<0.004	NT	NT
Barium	NA	NA	10	NT	NT	0.42	NT	NT
Copper	NA	NA	13	NT	NT	ND<0.04	NT	NT
Lead	NA	NA	0.15	NT	NT	ND<0.013	NT	NT
Thallium	NA	NA	0.05	NT	NT	ND<0.005	NT	NT
Vanadium	NA	NA	0.50	NT	NT	ND<0.05	NT	NT
Zinc	NA	NA	50	NT	NT	0.58	NT	NT
Total Metals								
Antimony	27	8,200	NA	NT	NT	3.3	NT	NT
Arsenic	10	10	NA	NT	3.8	4.3	4.2	ND<1.0
Barium	4,700	140,000	NA	NT	NT	15	NT	NT
Chromium	100*	100*	NA	NT	NT	16	NT	NT
Copper	2,500	76,000	NA	NT	NT	62	NT	NT
Lead	500	1,000	NA	NT	NT	26	NT	NT
Mercury	20	610	NA	NT	NT	1.1	NT	NT

Table South.1

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		GB Area	TB-XXXXX	TB-XXXXX	TB-XXXXX	TB-XXXXX
Depth Below Grade (ft.)					(0.0-0.3)	(0.3-2.3)	(2.3-4.3)	(5-7)
Sampling Date					7/22/02	7/22/02	7/22/02	7/22/02
Total Metals								
Nickel	1,400	7,500	NA	NT	NT	15	NT	NT
Selenium	340	10,000	NA	NT	NT	1.6	NT	NT
Vanadium	470	14,000	NA	NT	NT	18	NT	NT
Zinc	20,000	610,000	NA	NT	NT	30	NT	NT
Cyanide (Total)	1,400	41,000	NA	NT	NT	ND<5.0	NT	ND<5.0
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	286	ND<50	NT	NT

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.

Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial	GB Area	TB-YYYYY	TB-YYYYY	TB-YYYYY	TB-ZZZZZ	TB-ZZZZZ
Depth Below Grade (ft.)				(0.0-0.3)	(0.3-2.3)	(4-6)	(0.0-0.3)	(0.3-2.3)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)								
Acenaphthene	1,000	2,500	84	NT	NT	NT	NT	ND<0.20
Acenaphthylene	1,000	2,500	84	NT	NT	NT	NT	ND<0.20
Anthracene	1,000	2,500	400	NT	NT	NT	NT	ND<0.20
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	NT	0.38
Benzo[a]pyrene	1	1	1	NT	NT	NT	NT	0.41
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	NT	0.44
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	NT	0.46
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	NT	ND<0.20
Chrysene	84	780	1	NT	NT	NT	NT	0.40
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	NT	ND<0.20
Fluoranthene	1,000	2,500	56	NT	NT	NT	NT	0.59
Fluorene	1,000	2,500	56	NT	NT	NT	NT	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	NT	0.41
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	ND<0.20
Phenanthrene	1,000	2,500	40	NT	NT	NT	NT	0.25
Pyrene	1,000	2,500	40	NT	NT	NT	NT	0.68
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Benzene	21	200	0.2	NT	NT	ND<0.001	NT	NT
sec-Butylbenzene	500	1,000	14	NT	NT	ND<0.005	NT	NT
Ethylbenzene	500	1,000	10.1	NT	NT	ND<0.005	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	ND<0.005	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	ND<0.005	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	ND<0.005	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	ND<0.005	NT	NT
Tetrachloroethene	12	110	1	NT	NT	ND<0.005	NT	NT

Table South.1

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		TB-YYYY	TB-YYYY	TB-YYYY	TB-ZZZZ	TB-ZZZZ
Depth Below Grade (ft.)			GB Area	(0.0-0.3)	(0.3-2.3)	(4-6)	(0.0-0.3)	(0.3-2.3)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Toluene	500	1,000	67	NT	NT	ND<0.005	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	ND<0.005	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.005	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.005	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	ND<0.005	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)								
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082								
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT
SPLP Metals								
Arsenic	NA	NA	0.5	NT	NT	NT	NT	ND<0.004
Barium	NA	NA	10	NT	NT	NT	NT	0.56
Copper	NA	NA	13	NT	NT	NT	NT	ND<0.04
Lead	NA	NA	0.15	NT	NT	NT	NT	ND<0.013
Thallium	NA	NA	0.05	NT	NT	NT	NT	ND<0.005
Vanadium	NA	NA	0.50	NT	NT	NT	NT	ND<0.05
Zinc	NA	NA	50	NT	NT	NT	NT	0.27
Total Metals								
Antimony	27	8,200	NA	NT	NT	NT	NT	ND<2.0
Arsenic	10	10	NA	NT	2.2	4.6	NT	ND<1.0
Barium	4,700	140,000	NA	NT	NT	NT	NT	14
Chromium	100*	100*	NA	NT	NT	NT	NT	5.1
Copper	2,500	76,000	NA	NT	NT	NT	NT	30
Lead	500	1,000	NA	NT	NT	NT	NT	28
Mercury	20	610	NA	NT	NT	NT	NT	ND<0.20

Table South.1

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		TB-YYYYY	TB-YYYYY	TB-YYYYY	TB-ZZZZZ	TB-ZZZZZ
Depth Below Grade (ft.)			GB Area	(0.0-0.3)	(0.3-2.3)	(4-6)	(0.0-0.3)	(0.3-2.3)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
Total Metals								
Nickel	1,400	7,500	NA	NT	NT	NT	NT	6.8
Selenium	340	10,000	NA	NT	NT	NT	NT	ND<1.0
Vanadium	470	14,000	NA	NT	NT	NT	NT	52
Zinc	20,000	610,000	NA	NT	NT	NT	NT	27
Cyanide (Total)	1,400	41,000	NA	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	NT	ND<50

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.

Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial	GB Area	TB-ZZZZZ	TB-ZZZZZ	TB-ZZZZZ	TB-AAAAAA	TB-AAAAAA
Depth Below Grade (ft.)				(2.3-4.3)	(5-7)	(10-12)	(0.0-0.3)	(0.3-2.3)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)								
Acenaphthene	1,000	2,500	84	0.28	NT	NT	NT	ND<0.20
Acenaphthylene	1,000	2,500	84	7.7	NT	NT	NT	0.49
Anthracene	1,000	2,500	400	2.9	NT	NT	NT	0.35
Benzo[a]anthracene	1	7.8	1	3.2	NT	NT	NT	0.93
Benzo[a]pyrene	1	1	1	7.3	NT	NT	NT	1.2
Benzo[b]fluoranthene	1	7.8	1	6.0	NT	NT	NT	1.1
Benzo[g,h,i]perylene	1,000	2,500	42	5.1	NT	NT	NT	1.1
Benzo[k]fluoranthene	8.4	78	1	2.6	NT	NT	NT	0.43
Chrysene	84	780	1	3.5	NT	NT	NT	0.94
Dibenz[a,h]anthracene	1	1	1	1.1	NT	NT	NT	0.23
Fluoranthene	1,000	2,500	56	3.8	NT	NT	NT	1.2
Fluorene	1,000	2,500	56	1.2	NT	NT	NT	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	3.9	NT	NT	NT	0.98
Naphthalene	1,000	2,500	56	3.4	NT	NT	NT	ND<0.20
Phenanthrene	1,000	2,500	40	4.3	NT	NT	NT	0.44
Pyrene	1,000	2,500	40	7.3	NT	NT	NT	1.5
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Benzene	21	200	0.2	NT	NT	ND<0.001	NT	NT
sec-Butylbenzene	500	1,000	14	NT	NT	ND<0.005	NT	NT
Ethylbenzene	500	1,000	10.1	NT	NT	ND<0.005	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	ND<0.005	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	ND<0.005	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	ND<0.005	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	ND<0.005	NT	NT
Tetrachloroethene	12	110	1	NT	NT	ND<0.005	NT	NT

Table South.1

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		GB Area	TB-ZZZZZ	TB-ZZZZZ	TB-ZZZZZ	TB-AAAAAA
Depth Below Grade (ft.)					(2.3-4.3)	(5-7)	(10-12)	(0.0-0.3)
Sampling Date					7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Toluene	500	1,000	67	NT	NT	ND<0.005	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	ND<0.005	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.005	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.005	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	ND<0.005	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)								
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	1.4	5.7
SPLP PCBs USEPA Method 8082								
PCB-1260	NA	NA	0.005	NT	NT	NT	ND<0.0005	ND<0.0005
SPLP Metals								
Arsenic	NA	NA	0.5	0.0099	NT	NT	NT	ND<0.004
Barium	NA	NA	10	0.67	NT	NT	NT	0.41
Copper	NA	NA	13	ND<0.04	NT	NT	NT	ND<0.04
Lead	NA	NA	0.15	0.033	NT	NT	NT	ND<0.013
Thallium	NA	NA	0.05	ND<0.005	NT	NT	NT	ND<0.005
Vanadium	NA	NA	0.50	ND<0.05	NT	NT	NT	0.20
Zinc	NA	NA	50	0.41	NT	NT	NT	0.22
Total Metals								
Antimony	27	8,200	NA	ND<2.0	NT	NT	NT	ND<2.0
Arsenic	10	10	NA	3.5	7.1	1.6	NT	2.2
Barium	4,700	140,000	NA	26	NT	NT	NT	27
Chromium	100*	100*	NA	8.9	NT	NT	NT	18
Copper	2,500	76,000	NA	69	NT	NT	NT	42
Lead	500	1,000	NA	65	NT	NT	NT	40
Mercury	20	610	NA	ND<0.20	NT	NT	NT	ND<0.20

Table South.1

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		TB-ZZZZZ	TB-ZZZZZ	TB-ZZZZZ	TB-AAAAAA	TB-AAAAAA
Depth Below Grade (ft.)			GB Area	(2.3-4.3)	(5-7)	(10-12)	(0.0-0.3)	(0.3-2.3)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
Total Metals								
Nickel	1,400	7,500	NA	8.6	NT	NT	NT	130
Selenium	340	10,000	NA	ND<1.0	NT	NT	NT	ND<1.0
Vanadium	470	14,000	NA	24	NT	NT	NT	380
Zinc	20,000	610,000	NA	74	NT	NT	NT	53
Cyanide (Total)	1,400	41,000	NA	ND<5.0	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	85	NT	NT	NT	125

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.
Units are milligrams per liter (mg/L).
- = 100 mg/kg for hexavalent chromium.
- ☐ = Concentration exceeds associated criterion.

Table South.1
**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial	GB Area	TB-AAAAAA	TB-AAAAAA	TB-BBBBBB	TB-BBBBBB	TB-BBBBBB
Depth Below Grade (ft.)				(2.3-4.3)	(10-12)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)								
Acenaphthene	1,000	2,500	84	ND<1.0	0.63	NT	0.63	0.49
Acenaphthylene	1,000	2,500	84	ND<1.0	3.3	NT	0.27	1.4
Anthracene	1,000	2,500	400	ND<1.0	5.6	NT	1.9	2.2
Benzo[a]anthracene	1	7.8	1	ND<1.0	41	NT	8.0	6.0
Benzo[a]pyrene	1	1	1	ND<1.0	33	NT	5.5	7.3
Benzo[b]fluoranthene	1	7.8	1	ND<1.0	67	NT	8.2	8.6
Benzo[g,h,i]perylene	1,000	2,500	42	ND<1.0	22	NT	2.8	2.9
Benzo[k]fluoranthene	8.4	78	1	ND<1.0	19	NT	3.1	4.8
Chrysene	84	780	1	ND<1.0	30	NT	8.8	6.5
Dibenz[a,h]anthracene	1	1	1	ND<1.0	1.9	NT	0.75	0.99
Fluoranthene	1,000	2,500	56	ND<1.0	40	NT	19	11
Fluorene	1,000	2,500	56	ND<1.0	1.0	NT	0.49	0.59
Indeno[1,2,3-cd]pyrene	1	7.8	1	ND<1.0	28	NT	3.6	3.5
Naphthalene	1,000	2,500	56	ND<1.0	1.7	NT	0.24	0.25
Phenanthrene	1,000	2,500	40	ND<1.0	11	NT	12	5.8
Pyrene	1,000	2,500	40	ND<1.0	80	NT	16	10
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Benzene	21	200	0.2	NT	NT	NT	NT	NT
sec-Butylbenzene	500	1,000	14	NT	NT	NT	NT	NT
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	NT
Tetrachloroethene	12	110	1	NT	NT	NT	NT	NT

Table South.1

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		GB Area	TB-AAAAAA	TB-AAAAAA	TB-BBBBBB	TB-BBBBBB
Depth Below Grade (ft.)					(2.3-4.3)	(10-12)	(0.0-0.3)	(0.3-2.3)
Sampling Date					7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Toluene	500	1,000	67	NT	NT	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)								
PCB-1260	1	10	NA	ND<0.50	2.9	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082								
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT
SPLP Metals								
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT
Copper	NA	NA	13	NT	NT	NT	NT	NT
Lead	NA	NA	0.15	NT	NT	NT	NT	NT
Thallium	NA	NA	0.05	NT	NT	NT	NT	NT
Vanadium	NA	NA	0.50	NT	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT
Total Metals								
Antimony	27	8,200	NA	NT	NT	NT	NT	NT
Arsenic	10	10	NA	ND<1.0	1.1	4.0	5.8	9.1
Barium	4,700	140,000	NA	NT	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	NT	NT	NT
Lead	500	1,000	NA	NT	NT	NT	NT	NT
Mercury	20	610	NA	NT	NT	NT	NT	NT

Table South.1
**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		GB Area	TB-AAAAAA	TB-AAAAAA	TB-BBBBBB	TB-BBBBBB
Depth Below Grade (ft.)					(2.3-4.3)	(10-12)	(0.0-0.3)	(0.3-2.3)
Sampling Date					7/22/02	7/22/02	7/22/02	7/22/02
Total Metals								
Nickel	1,400	7,500	NA	NT	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	NT
Cyanide (Total)	1,400	41,000	NA	ND<5.0	NT	NT	NT	ND<5.0
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	348	NT	NT	NT	156

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.

Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		GB Area	TB-BBBBBB	TB-BBBBBB	TB-CCCCC	TB-CCCCC
Depth Below Grade (ft.)				(5-7)	(10-12)	(0.0-0.3)	(0.3-2.3)	(5-7)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)								
Acenaphthene	1,000	2,500	84	NT	NT	NT	ND<0.20	NT
Acenaphthylene	1,000	2,500	84	NT	NT	NT	ND<0.20	NT
Anthracene	1,000	2,500	400	NT	NT	NT	ND<0.20	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	ND<0.20	NT
Benzo[a]pyrene	1	1	1	NT	NT	NT	ND<0.20	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	ND<0.20	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	ND<0.20	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	ND<0.20	NT
Chrysene	84	780	1	NT	NT	NT	ND<0.20	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	ND<0.20	NT
Fluoranthene	1,000	2,500	56	NT	NT	NT	ND<0.20	NT
Fluorene	1,000	2,500	56	NT	NT	NT	ND<0.20	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	ND<0.20	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	ND<0.20	NT
Phenanthrene	1,000	2,500	40	NT	NT	NT	ND<0.20	NT
Pyrene	1,000	2,500	40	NT	NT	NT	ND<0.20	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Benzene	21	200	0.2	NT	NT	NT	NT	NT
sec-Butylbenzene	500	1,000	14	NT	NT	NT	NT	NT
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	NT
Tetrachloroethene	12	110	1	NT	NT	NT	NT	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		GB Area	TB-BBBBBB	TB-BBBBBB	TB-CCCCC	TB-CCCCC
Depth Below Grade (ft.)				(5-7)	(10-12)	(0.0-0.3)	(0.3-2.3)	(5-7)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Toluene	500	1,000	67	NT	NT	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)								
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.3
SPLP PCBs USEPA Method 8082								
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	ND<0.0005
SPLP Metals								
Arsenic	NA	NA	0.5	NT	NT	NT	ND<0.004	NT
Barium	NA	NA	10	NT	NT	NT	0.22	NT
Copper	NA	NA	13	NT	NT	NT	ND<0.04	NT
Lead	NA	NA	0.15	NT	NT	NT	ND<0.013	NT
Thallium	NA	NA	0.05	NT	NT	NT	ND<0.005	NT
Vanadium	NA	NA	0.50	NT	NT	NT	ND<0.05	NT
Zinc	NA	NA	50	NT	NT	NT	0.10	NT
Total Metals								
Antimony	27	8,200	NA	NT	NT	NT	ND<2.0	NT
Arsenic	10	10	NA	6.9	4.2	NT	ND<1.0	9.0
Barium	4,700	140,000	NA	NT	NT	NT	19	NT
Chromium	100*	100*	NA	NT	NT	NT	4.9	NT
Copper	2,500	76,000	NA	NT	NT	NT	24	NT
Lead	500	1,000	NA	NT	NT	NT	7.4	NT
Mercury	20	610	NA	NT	NT	NT	ND<0.20	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		GB Area	TB-BBBBBB	TB-BBBBBB	TB-CCCCC	TB-CCCCC
Depth Below Grade (ft.)					(5-7)	(10-12)	(0.0-0.3)	(0.3-2.3)
Sampling Date					7/22/02	7/22/02	7/22/02	7/22/02
Total Metals								
Nickel	1,400	7,500	NA	NT	NT	NT	8.6	NT
Selenium	340	10,000	NA	NT	NT	NT	ND<1.0	NT
Vanadium	470	14,000	NA	NT	NT	NT	33	NT
Zinc	20,000	610,000	NA	NT	NT	NT	50	NT
Cyanide (Total)	1,400	41,000	NA	NT	NT	NT	ND<5.0	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	ND<50	75

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.

Units are milligrams per liter (mg/L).

* = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		GB Area	TB-CCCCC	TB-DDDDDD	TB-DDDDDD	TB-DDDDDD
Depth Below Grade (ft.)					(10-12)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)
Sampling Date					7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)								
Acenaphthene	1,000	2,500	84	NT	NT	ND<0.20	ND<0.20	NT
Acenaphthylene	1,000	2,500	84	NT	NT	ND<0.20	ND<0.20	NT
Anthracene	1,000	2,500	400	NT	NT	ND<0.20	0.21	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	ND<0.20	1.3	NT
Benzo[a]pyrene	1	1	1	NT	NT	ND<0.20	1.5	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	ND<0.20	2.0	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	ND<0.20	0.68	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	ND<0.20	1.1	NT
Chrysene	84	780	1	NT	NT	ND<0.20	1.5	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	ND<0.20	0.22	NT
Fluoranthene	1,000	2,500	56	NT	NT	ND<0.20	2.6	NT
Fluorene	1,000	2,500	56	NT	NT	ND<0.20	ND<0.20	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	ND<0.20	0.83	NT
Naphthalene	1,000	2,500	56	NT	NT	ND<0.20	ND<0.20	NT
Phenanthrene	1,000	2,500	40	NT	NT	ND<0.20	1.8	NT
Pyrene	1,000	2,500	40	NT	NT	ND<0.20	2.3	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Benzene	21	200	0.2	NT	NT	NT	NT	NT
sec-Butylbenzene	500	1,000	14	NT	NT	NT	NT	NT
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	NT
Tetrachloroethene	12	110	1	NT	NT	NT	NT	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		GB Area	TB-CCCCC	TB-DDDDDD	TB-DDDDDD	TB-DDDDDD
Depth Below Grade (ft.)					(10-12)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)
Sampling Date					7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Toluene	500	1,000	67	NT	NT	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)								
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082								
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT
SPLP Metals								
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT
Copper	NA	NA	13	NT	NT	NT	NT	NT
Lead	NA	NA	0.15	NT	NT	NT	NT	NT
Thallium	NA	NA	0.05	NT	NT	NT	NT	NT
Vanadium	NA	NA	0.50	NT	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT
Total Metals								
Antimony	27	8,200	NA	NT	NT	NT	NT	NT
Arsenic	10	10	NA	1.4	NT	ND<1.0	3.0	4.1
Barium	4,700	140,000	NA	NT	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	NT	NT	NT
Lead	500	1,000	NA	NT	NT	NT	NT	NT
Mercury	20	610	NA	NT	NT	NT	NT	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial	GB Area	TB-CCCCC	TB-DDDDDD	TB-DDDDDD	TB-DDDDDD	TB-DDDDDD
Depth Below Grade (ft.)				(10-12)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)	(5-7)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
Total Metals								
Nickel	1,400	7,500	NA	NT	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	NT
Cyanide (Total)	1,400	41,000	NA	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	ND<50	NT	NT

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.

Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial	GB Area	TB-DDDDDD	TB-EEEEEE	TB-EEEEEE	TB-EEEEEE	TB-EEEEEE
Depth Below Grade (ft.)				(10-12)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)	(5-7)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)								
Acenaphthene	1,000	2,500	84	NT	NT	ND<0.20	ND<0.20	NT
Acenaphthylene	1,000	2,500	84	NT	NT	ND<0.20	ND<0.20	NT
Anthracene	1,000	2,500	400	NT	NT	ND<0.20	ND<0.20	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	0.46	0.50	NT
Benzo[a]pyrene	1	1	1	NT	NT	0.51	0.64	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	0.78	0.82	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	0.23	0.33	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	0.41	0.46	NT
Chrysene	84	780	1	NT	NT	0.59	0.57	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	ND<0.20	ND<0.20	NT
Fluoranthene	1,000	2,500	56	NT	NT	0.87	0.81	NT
Fluorene	1,000	2,500	56	NT	NT	ND<0.20	ND<0.20	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	0.30	0.38	NT
Naphthalene	1,000	2,500	56	NT	NT	ND<0.20	ND<0.20	NT
Phenanthrene	1,000	2,500	40	NT	NT	0.29	0.38	NT
Pyrene	1,000	2,500	40	NT	NT	0.80	0.77	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Benzene	21	200	0.2	NT	NT	NT	ND<0.001	NT
sec-Butylbenzene	500	1,000	14	NT	NT	NT	ND<0.005	NT
Ethylbenzene	500	1,000	10.1	NT	NT	NT	ND<0.005	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	ND<0.005	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	ND<0.005	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	ND<0.005	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	ND<0.005	NT
Tetrachloroethene	12	110	1	NT	NT	NT	ND<0.005	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		GB Area	TB-DDDDDD	TB-EEEEEE	TB-EEEEEE	TB-EEEEEE
Depth Below Grade (ft.)				(10-12)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)	(5-7)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Toluene	500	1,000	67	NT	NT	NT	ND<0.005	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	ND<0.005	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.005	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.005	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	ND<0.005	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)								
PCB-1260	1	10	NA	ND<0.50	ND<0.50	42	ND<0.50	2.6
SPLP PCBs USEPA Method 8082								
PCB-1260	NA	NA	0.005	NT	NT	0.0018	NT	ND<0.0005
SPLP Metals								
Arsenic	NA	NA	0.5	NT	NT	NT	0.014	NT
Barium	NA	NA	10	NT	NT	NT	0.67	NT
Copper	NA	NA	13	NT	NT	NT	ND<0.04	NT
Lead	NA	NA	0.15	NT	NT	NT	ND<0.013	NT
Thallium	NA	NA	0.05	NT	NT	NT	ND<0.005	NT
Vanadium	NA	NA	0.50	NT	NT	NT	ND<0.05	NT
Zinc	NA	NA	50	NT	NT	NT	0.39	NT
Total Metals								
Antimony	27	8,200	NA	NT	NT	NT	ND<2.0	NT
Arsenic	10	10	NA	12	NT	2.4	9.7	11
Barium	4,700	140,000	NA	NT	NT	NT	36	NT
Chromium	100*	100*	NA	NT	NT	NT	10	NT
Copper	2,500	76,000	NA	NT	NT	NT	72	NT
Lead	500	1,000	NA	NT	NT	NT	58	NT
Mercury	20	610	NA	NT	NT	NT	3.0	NT

Table South.1

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial	GB Area	TB-DDDDDD	TB-EEEEEE	TB-EEEEEE	TB-EEEEEE	TB-EEEEEE
Depth Below Grade (ft.)				(10-12)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)	(5-7)
Sampling Date				7/22/02	7/22/02	7/22/02	7/22/02	7/22/02
Total Metals								
Nickel	1,400	7,500	NA	NT	NT	NT	9.3	NT
Selenium	340	10,000	NA	NT	NT	NT	ND<1.0	NT
Vanadium	470	14,000	NA	NT	NT	NT	23	NT
Zinc	20,000	610,000	NA	NT	NT	NT	78	NT
Cyanide (Total)	1,400	41,000	NA	NT	NT	NT	ND<5.0	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	ND<50	ND<50	NT

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.

Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		GB Area	TB-EEEEEE	TB-FFFFFF	TB-FFFFFF	TB-FFFFFF
Depth Below Grade (ft.)					(10-12)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)
Sampling Date					7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)								
Acenaphthene	1,000	2,500	84	NT	NT	ND<0.20	ND<0.20	NT
Acenaphthylene	1,000	2,500	84	NT	NT	ND<0.20	ND<0.20	NT
Anthracene	1,000	2,500	400	NT	NT	ND<0.20	ND<0.20	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	ND<0.20	ND<0.20	NT
Benzo[a]pyrene	1	1	1	NT	NT	ND<0.20	ND<0.20	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	ND<0.20	ND<0.20	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	ND<0.20	ND<0.20	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	ND<0.20	ND<0.20	NT
Chrysene	84	780	1	NT	NT	ND<0.20	ND<0.20	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	ND<0.20	ND<0.20	NT
Fluoranthene	1,000	2,500	56	NT	NT	ND<0.20	ND<0.20	NT
Fluorene	1,000	2,500	56	NT	NT	ND<0.20	ND<0.20	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	ND<0.20	ND<0.20	NT
Naphthalene	1,000	2,500	56	NT	NT	ND<0.20	ND<0.20	NT
Phenanthrene	1,000	2,500	40	NT	NT	ND<0.20	ND<0.20	NT
Pyrene	1,000	2,500	40	NT	NT	ND<0.20	ND<0.20	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Benzene	21	200	0.2	NT	NT	NT	NT	NT
sec-Butylbenzene	500	1,000	14	NT	NT	NT	NT	NT
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	NT
Tetrachloroethene	12	110	1	NT	NT	NT	NT	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/Commercial		GB Area	TB-EEEEEE	TB-FFFFFF	TB-FFFFFF	TB-FFFFFF
Depth Below Grade (ft.)					(10-12)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)
Sampling Date					7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Toluene	500	1,000	67	NT	NT	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)								
PCB-1260	1	10	NA	ND<0.50	7.5	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082								
PCB-1260	NA	NA	0.005	NT	ND<0.0005	NT	NT	NT
SPLP Metals								
Arsenic	NA	NA	0.5	NT	NT	ND<0.004	ND<0.004	NT
Barium	NA	NA	10	NT	NT	0.34	0.42	NT
Copper	NA	NA	13	NT	NT	ND<0.04	ND<0.04	NT
Lead	NA	NA	0.15	NT	NT	ND<0.013	ND<0.013	NT
Thallium	NA	NA	0.05	NT	NT	ND<0.005	ND<0.005	NT
Vanadium	NA	NA	0.50	NT	NT	ND<0.05	ND<0.05	NT
Zinc	NA	NA	50	NT	NT	0.27	0.23	NT
Total Metals								
Antimony	27	8,200	NA	NT	NT	ND<2.0	ND<2.0	NT
Arsenic	10	10	NA	5.8	NT	ND<1.0	ND<1.0	ND<1.0
Barium	4,700	140,000	NA	NT	NT	19	9.6	NT
Chromium	100*	100*	NA	NT	NT	4.4	3.0	NT
Copper	2,500	76,000	NA	NT	NT	6.9	37	NT
Lead	500	1,000	NA	NT	NT	21	4.6	NT
Mercury	20	610	NA	NT	NT	ND<0.20	ND<0.20	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/Commercial		GB Area	TB-EEEEEE	TB-FFFFFF	TB-FFFFFF	TB-FFFFFF
Depth Below Grade (ft.)					(10-12)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)
Sampling Date					7/22/02	7/22/02	7/22/02	7/22/02
Total Metals								
Nickel	1,400	7,500	NA	NT	NT	2.9	6.4	NT
Selenium	340	10,000	NA	NT	NT	ND<1.0	ND<1.0	NT
Vanadium	470	14,000	NA	NT	NT	14	61	NT
Zinc	20,000	610,000	NA	NT	NT	14	24	NT
Cyanide (Total)	1,400	41,000	NA	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	ND<50	ND<50	NT

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.

Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		GB Area	TB-FFFFFF	TB-GGGGGG	TB-GGGGGG	TB-GGGGGG
Depth Below Grade (ft.)					(10-12)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)
Sampling Date					7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)								
Acenaphthene	1,000	2,500	84	0.26	NT	ND<0.20	ND<0.20	NT
Acenaphthylene	1,000	2,500	84	ND<0.20	NT	ND<0.20	ND<0.20	NT
Anthracene	1,000	2,500	400	0.34	NT	ND<0.20	ND<0.20	NT
Benzo[a]anthracene	1	7.8	1	0.38	NT	ND<0.20	ND<0.20	NT
Benzo[a]pyrene	1	1	1	0.43	NT	ND<0.20	ND<0.20	NT
Benzo[b]fluoranthene	1	7.8	1	0.46	NT	ND<0.20	ND<0.20	NT
Benzo[g,h,i]perylene	1,000	2,500	42	ND<0.20	NT	ND<0.20	ND<0.20	NT
Benzo[k]fluoranthene	8.4	78	1	ND<0.20	NT	ND<0.20	ND<0.20	NT
Chrysene	84	780	1	0.40	NT	ND<0.20	ND<0.20	NT
Dibenz[a,h]anthracene	1	1	1	ND<0.20	NT	ND<0.20	ND<0.20	NT
Fluoranthene	1,000	2,500	56	0.86	NT	ND<0.20	ND<0.20	NT
Fluorene	1,000	2,500	56	ND<0.20	NT	ND<0.20	ND<0.20	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	0.21	NT	ND<0.20	ND<0.20	NT
Naphthalene	1,000	2,500	56	0.24	NT	ND<0.20	ND<0.20	NT
Phenanthrene	1,000	2,500	40	0.86	NT	ND<0.20	ND<0.20	NT
Pyrene	1,000	2,500	40	0.88	NT	ND<0.20	ND<0.20	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Benzene	21	200	0.2	ND<0.001	NT	NT	NT	NT
sec-Butylbenzene	500	1,000	14	ND<0.005	NT	NT	NT	NT
Ethylbenzene	500	1,000	10.1	ND<0.005	NT	NT	NT	NT
Isopropylbenzene	500	1,000	132	ND<0.005	NT	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	ND<0.005	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	ND<0.005	NT	NT	NT	NT
n-Propylbenzene	500	1,000	14	ND<0.005	NT	NT	NT	NT
Tetrachloroethene	12	110	1	ND<0.005	NT	NT	NT	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/ Commercial		GB Area	TB-FFFFFF	TB-GGGGGG	TB-GGGGGG	TB-GGGGGG
Depth Below Grade (ft.)					(10-12)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)
Sampling Date					7/22/02	7/22/02	7/22/02	7/22/02
USEPA Method 8260 Volatile Organic Compounds (VOCs)								
Toluene	500	1,000	67	ND<0.005	NT	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	ND<0.005	NT	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	ND<0.005	NT	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	ND<0.005	NT	NT	NT	NT
Xylenes (total)	500	1,000	19.5	ND<0.005	NT	NT	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)								
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs USEPA Method 8082								
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT
SPLP Metals								
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT
Copper	NA	NA	13	NT	NT	NT	NT	NT
Lead	NA	NA	0.15	NT	NT	NT	NT	NT
Thallium	NA	NA	0.05	NT	NT	NT	NT	NT
Vanadium	NA	NA	0.50	NT	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT
Total Metals								
Antimony	27	8,200	NA	NT	NT	NT	NT	NT
Arsenic	10	10	NA	3.8	NT	ND<1.0	ND<1.0	ND<1.0
Barium	4,700	140,000	NA	NT	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	NT	NT	NT
Lead	500	1,000	NA	NT	NT	NT	NT	NT
Mercury	20	610	NA	NT	NT	NT	NT	NT

Table South.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)				
	Residential	Industrial/Commercial		GB Area	TB-FFFFF	TB-GGGGGG	TB-GGGGGG	TB-GGGGGG
Depth Below Grade (ft.)					(10-12)	(0.0-0.3)	(0.3-2.3)	(2.3-4.3)
Sampling Date					7/22/02	7/22/02	7/22/02	7/22/02
Total Metals								
Nickel	1,400	7,500	NA	NT	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	NT
Cyanide (Total)	1,400	41,000	NA	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	ND<50	ND<50	NT

Notes:

mg/kg = milligrams per kilogram.

ppm = Parts per million (comparable to mg/kg).

NA = Not applicable.

ND = Not detected above laboratory minimum detection limit.

NT = Not tested.

SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.

Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Table South.2
Comparison of Surface Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)		
	Residential	Industrial/ Commercial	GB Area	SS-QQ	SS-RR	SS-SS
Depth Below Grade (ft.)				(0.5-1.0)	(0.3-0.5)	(0.3-0.5)
Sampling Date				7/18/02	7/19/02	7/19/02
SPLP Metals						
Arsenic	NA	NA	0.5	ND<0.004	ND<0.004	NT
Total Metals						
Antimony	27	8,200	NA	NT	7.6	NT
Arsenic	10	10	NA	ND<1.0	13	2.6
Barium	4,700	140,000	NA	NT	60	NT
Chromium	100*	100*	NA	NT	37	NT
Copper	2,500	76,000	NA	NT	120	NT
Lead	500	1,000	NA	NT	160	NT
Mercury	20	610	NA	NT	0.25	NT
Nickel	1,400	7,500	NA	NT	51	NT
Selenium	340	10,000	NA	NT	2.8	NT
Vanadium	470	14,000	NA	NT	150	NT
Zinc	20,000	610,000	NA	NT	210	NT
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)						
Acenaphthene	1,000	2,500	84	ND<0.20	0.25	ND<0.20
Acenaphthylene	1,000	2,500	84	0.50	0.27	ND<0.20
Anthracene	1,000	2,500	400	ND<0.20	0.47	ND<0.20
Benzo[a]anthracene	1	7.8	1	0.26	2.3	0.26
Benzo[a]pyrene	1	1	1	0.29	2.2	0.36
Benzo[b]fluoranthene	1	7.8	1	0.37	3.5	0.55
Benzo[g,h,i]perylene	1,000	2,500	42	0.37	1.3	ND<0.20
Benzo[k]fluoranthene	8.4	78	1	ND<0.20	1.3	0.24
Chrysene	84	780	1	0.39	3.0	0.36
Dibenz[a,h]anthracene	1	1	1	ND<0.20	0.41	ND<0.20
Fluoranthene	1,000	2,500	56	0.54	5.2	0.61
Fluorene	1,000	2,500	56	ND<0.20	0.20	ND<0.20

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Table South.2
Comparison of Surface Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, Connecticut

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)		
	Residential	Industrial/Commercial	GB Area	SS-QQ	SS-RR	SS-SS
Depth Below Grade (ft.)				(0.5-1.0)	(0.3-0.5)	(0.3-0.5)
Sampling Date				7/18/02	7/19/02	7/19/02
USEPA Method 8270C Polynuclear Aromatic Hydrocarbons (PAHs)						
Indeno[1,2,3-cd]pyrene	1	7.8	1	0.36	1.5	ND<0.20
Naphthalene	1,000	2,500	56	ND<0.20	0.20	ND<0.20
Phenanthrene	1,000	2,500	40	0.26	3.3	0.23
Pyrene	1,000	2,500	40	0.53	4.4	0.53
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)						
PCB-1260	1	10	NA	ND<0.50	1.0	3.2
SPLP PCBs USEPA Method 8082						
PCB-1260	NA	NA	0.005	ND<0.0005	ND<0.0005	ND<0.0005
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	56	NT	NT

Notes:

- mg/kg = milligrams per kilogram.
- ppm = Parts per million (comparable to mg/kg).
- NA = Not applicable.
- ND = Not detected.
- NT = Not tested.
- < = Less than minimum detection limit.
- SPLP = Test performed on leachate from Synthetic Precipitation Leachate Procedure.
- Units are milligrams per liter (mg/L).
- ☐ = 100 mg/kg for hexavalent chromium.
- ☐ = Concentration exceeds associated criterion.

**Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)							
		Residential	Industrial/ Commercial	MW-1	MW-2	MW-3			MW-4D		
Sample Collection Date				6-18-98	6-18-98	6-18-98	5-29-01	9-11-01	6-18-98	6-1-01	9-14-01
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	0.5	NC	NC	NT	NT	NT	ND<0.50	ND<0.50	NT	ND<0.50	ND<0.50
USEPA Method 8270 Polynuclear Aromatics (PAHs)											
Acenaphthene	NC	NC	NC	ND<5.0	ND<5.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
Acenaphthylene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Anthracene	1,100,000	NC	NC	ND<5.0	ND<5.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
Benzo[a]anthracene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.06	ND<0.06	ND<0.30	ND<0.06	ND<0.06
Benzo[a]pyrene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.20	ND<0.20	ND<0.30	ND<0.20	ND<0.20
Benzo[b]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.08	ND<0.08	ND<0.30	ND<0.08	ND<0.08
Benzo[g,h,i]perylene	NC	NC	NC	ND<20	ND<20	ND<20	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0
Benzo[k]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Chrysene	NC	NC	NC	ND<5.0	ND<5.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
Dibenz[a,h]anthracene	NC	NC	NC	ND<20	ND<20	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50
Fluoranthene	3,700	NC	NC	ND<5.0	ND<5.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
Fluorene	140,000	NC	NC	ND<5.0	ND<5.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
Indeno[1,2,3-cd]pyrene	NC	NC	NC	ND<20	ND<20	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50
Phenanthrene	0.3	NC	NC	ND<0.07	ND<0.07	ND<0.07	ND<0.077	ND<0.077	ND<0.07	ND<0.077	ND<0.077
Pyrene	110,000	NC	NC	ND<5.0	ND<5.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
USEPA Method 8021B/8260 Volatile Organic Compounds (VOCs)											
Bromodichloromethane	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Chloroform	14,100	287	710	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethane	NC	34,600	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethene	96	1	6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
cis-1,2-Dichloroethene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	5.0	3.3	2.2
4-Isopropyltoluene	NC	NC	NC	NT	NT	NT	ND<1.0	ND<1.0	NT	ND<1.0	ND<1.0
Tetrachloroethene	88	1,500	3,820	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1,1-Trichloroethane	62,000	20,400	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Trichloroethene	2,340	219	540	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.0	2.1	ND<1.0

Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)							
		Residential	Industrial/ Commercial	MW-1	MW-2	MW-3			MW-4D		
Sample Collection Date				6-18-98	6-18-98	6-18-98	5-29-01	9-11-01	6-18-98	6-1-01	9-14-01
Total Metals											
Arsenic	4	NC	NC	ND<50	ND<50	ND<50	ND<4	ND<4	ND<50	ND<4	ND<4
Barium	NC	NC	NC	ND<500	ND<500	ND<500	ND<50	82	ND<500	ND<50	ND<50
Cadmium	6	NC	NC	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Copper	48	NC	NC	NT	NT	NT	ND<40	ND<40	NT	ND<40	ND<40
Lead	13	NC	NC	ND<5	ND<5	ND<5	ND<13	ND<13	ND<5	ND<13	ND<13
Nickel	880	NC	NC	NT	NT	NT	ND<50	ND<50	NT	ND<50	ND<50
Selenium	50	NC	NC	ND<10	ND<10	ND<10	24	ND<10	20J	19	ND<10
Vanadium	NC	NC	NC	NT	NT	NT	NT	NT	NT	NT	NT
Zinc	123	NC	NC	NT	NT	NT	ND<10	ND<10	NT	ND<10	ND<10
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	NC	NC	NT	NT	NT	ND<100	ND<100	NT	ND<100	ND<100

Notes:

- NC = No criterion established.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- ppb = parts per billion.
- µg/L = micrograms per liter (comparable to ppb).
- R = Analyte was tested for, but data validation findings indicate that the testing results are unusable
- J = based on QA/QC for that test.
The reported concentration is an estimated quantity due to associated QA
- (1) = results found outside of recommended control limits.
Duplicate sample for quality control (QC) purposes.
- ☐ = Concentration exceeds associated criterion.

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**Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)							
		Residential	Industrial/ Commercial	MW-4S			MW-5			MW-5A ⁽¹⁾	MW-6
Sample Collection Date				6-18-98	5-31-01	9-14-01	6-18-98	5-30-01	9-14-01	9-14-01	6-18-98
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	0.5	NC	NC	NT	ND<0.50	ND<0.50	NT	ND<0.50	ND<0.50	ND<0.50	ND<1.0
USEPA Method 8270 Polynuclear Aromatics (PAHs)											
Acenaphthene	NC	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<5.0
Acenaphthylene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Anthracene	1,100,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<5.0
Benzo[a]anthracene	0.3	NC	NC	ND<0.30	ND<0.06	ND<0.06	ND<0.30	ND<0.06	ND<0.06	ND<0.06	ND<0.30
Benzo[a]pyrene	0.3	NC	NC	ND<0.30	ND<0.20	ND<0.20	ND<0.30	ND<0.20	ND<0.20	ND<0.20	ND<0.30
Benzo[b]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.08	ND<0.08	ND<0.30	ND<0.08	ND<0.08	ND<0.08	ND<0.30
Benzo[g,h,i]perylene	NC	NC	NC	ND<20	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<20
Benzo[k]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Chrysene	NC	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<5.0
Dibenz[a,h]anthracene	NC	NC	NC	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<20
Fluoranthene	3,700	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<5.0
Fluorene	140,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<5.0
Indeno[1,2,3-cd]pyrene	NC	NC	NC	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<20
Phenanthrene	0.3	NC	NC	ND<0.077	ND<0.077	ND<0.077	ND<0.07	ND<0.077	ND<0.077	ND<0.077	ND<0.07
Pyrene	110,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<5.0
USEPA Method 8021B/8260 Volatile Organic Compounds (VOCs)											
Bromodichloromethane	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Chloroform	14,100	287	710	ND<1.0	ND<1.0	ND<1.0	4.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethane	NC	34,600	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethene	96	1	6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
cis-1,2-Dichloroethene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
4-Isopropyltoluene	NC	NC	NC	NT	ND<1.0	ND<1.0	NT	NT	ND<1.0	NT	NT
Tetrachloroethene	88	1,500	3,820	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1,1-Trichloroethane	62,000	20,400	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Trichloroethene	2,340	219	540	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0

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**Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)							
		Residential	Industrial/ Commercial	MW-4S			MW-5			MW-5A ⁽¹⁾	MW-6
Sample Collection Date				6-18-98	5-31-01	9-14-01	6-18-98	5-30-01	9-14-01	9-14-01	6-18-98
Total Metals											
Arsenic	4	NC	NC	ND<50	ND<4	ND<4	ND<50	86	29	38	ND<50
Barium	NC	NC	NC	ND<500	ND<50	81	ND<500	ND<50	ND<50	ND<50	ND<500
Cadmium	6	NC	NC	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Copper	48	NC	NC	NT	76	ND<40	NT	ND<40	ND<40	ND<40	NT
Lead	13	NC	NC	ND<5	ND<13	ND<13	22	ND<13	ND<13	ND<13	21
Nickel	880	NC	NC	NT	ND<50	ND<50	NT	ND<50	ND<50	ND<50	NT
Selenium	50	NC	NC	ND<10	ND<10	ND<10	ND<10	14	ND<10	ND<10	ND<10
Vanadium	NC	NC	NC	NT	NT	NT	NT	NT	NT	NT	NT
Zinc	123	NC	NC	NT	120	40	NT	ND<10	ND<10	ND<10	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	NC	NC	NT	ND<100	ND<100	NT	ND<100	ND<100	ND<100	NT

Notes:

- NC = No criterion established.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- ppb = parts per billion.
- µg/L = micrograms per liter (comparable to ppb).
- R = Analyte was tested for, but data validation findings indicate that the testing results are unusable
- J = based on QA/QC for that test.
- The reported concentration is an estimated quantity due to associated QA
- (1) = results found outside of recommended control limits.
- Duplicate sample for quality control (QC) purposes.
- ☐ = Concentration exceeds associated criterion.

Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)								
		Residential	Industrial/ Commercial	MW-7			MW-9A			MW-10		
Sample Collection Date				6-18-98	5-29-01	9-11-01	6-18-98	5-30-01	9-13-01	6-19-98	5-30-01	9-12-01
USEPA Method 8082 PolychlorinatedBiphenyls (PCBs)	0.5	NC	NC	NT	ND<0.50	ND<0.50	NT	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50
USEPA Method 8270 Polynuclear Aromatics (PAHs)												
Acenaphthene	NC	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	7.5	6.6	ND<5.0	ND<1.0	ND<1.0
Acenaphthylene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	2.2	8.9	8.1	ND<0.30	ND<0.30	ND<0.30
Anthracene	1,100,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	1.3	2.5	ND<0.30	ND<1.0	ND<1.0
Benzo[a]anthracene	0.3	NC	NC	ND<0.30	ND<0.06	ND<0.06	ND<0.30	0.33	5.6	ND<0.30	ND<0.06	0.30
Benzo[a]pyrene	0.3	NC	NC	ND<0.30	ND<0.20	ND<0.20	ND<0.30	ND<0.20	4.4	ND<0.30	ND<0.20	0.20
Benzo[b]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.08	ND<0.08	ND<0.30	ND<0.08	6.1	ND<0.30	ND<0.08	0.25
Benzo[g,h,i]perylene	NC	NC	NC	ND<20	ND<1.0	ND<1.0	ND<20	ND<1.0	1.0	ND<20	ND<1.0	ND<1.0
Benzo[k]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	2.8	ND<0.30	ND<0.30	ND<0.30
Chrysene	NC	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	4.7	ND<5.0	ND<1.0	ND<1.0
Dibenz[a,h]anthracene	NC	NC	NC	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50
Fluoranthene	3,700	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	4.5	16	ND<5.0	1.0	1.4
Fluorene	140,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	12	14	ND<5.0	ND<1.0	ND<1.0
Indeno[1,2,3-cd]pyrene	NC	NC	NC	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	1.3	ND<20	ND<0.50	ND<0.50
Phenanthrene	0.3	NC	NC	ND<0.07	ND<0.077	ND<0.077	0.61	1.3	2.8	ND<0.07	ND<0.077	0.19
Pyrene	110,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	3.5	13	ND<5.0	1.2	1.5
USEPA Method 8021B/8260 Volatile Organic Compounds (VOCs)												
Bromodichloromethane	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Chloroform	14,100	287	710	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethane	NC	34,600	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	5.0	2.9	6.3
1,1-Dichloroethene	96	1	6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
cis-1,2-Dichloroethene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
4-Isopropyltoluene	NC	NC	NC	NT	ND<1.0	ND<1.0	NT	ND<1.0	ND<1.0	NT	NT	ND<1.0
Tetrachloroethene	88	1,500	3,820	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1,1-Trichloroethane	62,000	20,400	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	2.0	6.8	1.2
Trichloroethene	2,340	219	540	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0

**Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)								
		Residential	Industrial/ Commercial	MW-7			MW-9A			MW-10		
Sample Collection Date				6-18-98	5-29-01	9-11-01	6-18-98	5-30-01	9-13-01	6-19-98	5-30-01	9-12-01
Total Metals												
Arsenic	4	NC	NC	ND<50	ND<4	ND<4	ND<50	ND<4	ND<4	ND<50	ND<4	ND<4
Barium	NC	NC	NC	ND<500	ND<50	ND<50	ND<500	ND<50	ND<50	ND<500	ND<50	65
Cadmium	6	NC	NC	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Copper	48	NC	NC	NT	41	51	NT	ND<40	ND<40	NT	ND<40	ND<40
Lead	13	NC	NC	9	ND<13	ND<13	ND<5	ND<13	ND<13	ND<5	ND<13	ND<13
Nickel	880	NC	NC	NT	ND<50	ND<50	NT	ND<50	ND<50	NT	ND<50	ND<50
Selenium	50	NC	NC	ND<10	15	ND<10	ND<10	15	ND<10	R	14	12
Vanadium	NC	NC	NC	NT	NT	NT	NT	NT	NT	NT	NT	NT
Zinc	123	NC	NC	NT	70	260	NT	ND<10	ND<10	NT	ND<10	ND<10
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	NC	NC	NT	ND<100	ND<100	NT	490	120	NT	ND<100	ND<100

Notes:

- NC = No criterion established.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- ppb = parts per billion.
- µg/L = micrograms per liter (comparable to ppb).
- R = Analyte was tested for, but data validation findings indicate that the testing results are unusable
- J = based on QA/QC for that test.
- The reported concentration is an estimated quantity due to associated QA
- (1) = results found outside of recommended control limits.
- Duplicate sample for quality control (QC) purposes.
- ☐ = Concentration exceeds associated criterion.

Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)								
		Residential	Industrial/ Commercial	MW-12			MW-13			MW-14D		
Sample Collection Date				6-19-98	5-31-01	9-12-01	6-19-98	5-31-01	9-13-01	6-18-98	5-31-01	9-13-01
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	0.5	NC	NC	ND<1.0	ND<0.50	ND<0.50	NT	ND<0.50	ND<0.50	NT	ND<0.50	ND<0.50
USEPA Method 8270 Polynuclear Aromatics (PAHs)												
Acenaphthene	NC	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
Acenaphthylene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Anthracene	1,100,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
Benzo[a]anthracene	0.3	NC	NC	ND<0.30	ND<0.06	ND<0.06	ND<0.30	ND<0.06	ND<0.06	ND<0.30	ND<0.06	ND<0.06
Benzo[a]pyrene	0.3	NC	NC	ND<0.30	ND<0.20	ND<0.20	ND<0.30	ND<0.20	ND<0.20	ND<0.30	ND<0.20	ND<0.20
Benzo[b]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.08	ND<0.08	ND<0.30	ND<0.08	ND<0.08	ND<0.30	ND<0.08	ND<0.08
Benzo[g,h,i]perylene	NC	NC	NC	ND<20	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0
Benzo[k]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Chrysene	NC	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
Dibenz[a,h]anthracene	NC	NC	NC	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50
Fluoranthene	3,700	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
Fluorene	140,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
Indeno[1,2,3-cd]pyrene	NC	NC	NC	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50
Phenanthrene	0.3	NC	NC	ND<0.07	ND<0.077	ND<0.077	ND<0.07	ND<0.077	ND<0.077	ND<0.07	ND<0.077	ND<0.077
Pyrene	110,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
USEPA Method 8021B/8260 Volatile Organic Compounds (VOCs)												
Bromodichloromethane	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	2.0	ND<1.0	ND<1.0
Chloroform	14,100	287	710	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	12	ND<1.0	ND<1.0
1,1-Dichloroethane	NC	34,600	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethene	96	1	6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
cis-1,2-Dichloroethene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
4-Isopropyltoluene	NC	NC	NC	NT	NT	ND<1.0	NT	ND<1.0	ND<1.0	NT	ND<1.0	ND<1.0
Tetrachloroethene	88	1,500	3,820	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1,1-Trichloroethane	62,000	20,400	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Trichloroethene	2,340	219	540	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0

Table 7

**Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)								
		Residential	Industrial/ Commercial	MW-12			MW-13			MW-14D		
Sample Collection Date				6-19-98	5-31-01	9-12-01	6-19-98	5-31-01	9-13-01	6-18-98	5-31-01	9-13-01
Total Metals												
Arsenic	4	NC	NC	ND<50	ND<4	ND<4	ND<50	ND<4	ND<4	ND<50	ND<4	ND<4
Barium	NC	NC	NC	ND<500	ND<50	60	ND<500	ND<50	63	ND<500	160	190
Cadmium	6	NC	NC	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Copper	48	NC	NC	NT	ND<40	ND<40	NT	ND<40	ND<40	NT	ND<40	ND<40
Lead	13	NC	NC	ND<5	ND<13	ND<13	7J	ND<13	ND<13	ND<5	ND<13	ND<13
Nickel	880	NC	NC	NT	ND<50	ND<50	NT	ND<50	ND<50	NT	ND<50	ND<50
Selenium	50	NC	NC	R	ND<10	ND<10	R	ND<10	ND<10	10J	29	13
Vanadium	NC	NC	NC	NT	NT	NT	NT	NT	NT	NT	NT	NT
Zinc	123	NC	NC	NT	21	20	NT	ND<10	ND<10	NT	ND<10	ND<10
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	NC	NC	NT	ND<100	180	NT	ND<100	ND<100	NT	130	ND<100

Notes:

- NC = No criterion established.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- ppb = parts per billion.
- µg/L = micrograms per liter (comparable to ppb).
- R = Analyte was tested for, but data validation findings indicate that the testing results are unusable
- J = based on QA/QC for that test.
The reported concentration is an estimated quantity due to associated QA
- (1) = results found outside of recommended control limits.
Duplicate sample for quality control (QC) purposes.
- ☐ = Concentration exceeds associated criterion.



**Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)								
		Residential	Industrial/ Commercial	MW-14S			MW-15			MW-16		
				6-19-98	5-31-01	9-13-01	6-18-98	5-30-01	9-13-01	6-18-98	5-30-01	9-13-01
Sample Collection Date												
USEPA Method 8082 PolychlorinatedBiphenyls (PCBs)	0.5	NC	NC	NT	ND<0.50	ND<0.50	NT	ND<0.50	ND<0.50	NT	ND<0.50	ND<0.50
USEPA Method 8270 Polynuclear Aromatics (PAHs)												
Acenaphthene	NC	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
Acenaphthylene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Anthracene	1,100,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
Benzo[a]anthracene	0.3	NC	NC	0.47	ND<0.06	0.09	ND<0.30	ND<0.06	ND<0.06	ND<0.30	ND<0.06	ND<0.06
Benzo[a]pyrene	0.3	NC	NC	ND<0.30	ND<0.20	ND<0.20	ND<0.30	ND<0.20	ND<0.20	ND<0.30	ND<0.20	ND<0.20
Benzo[b]fluoranthene	0.3	NC	NC	0.73	ND<0.08	0.13	ND<0.30	ND<0.08	ND<0.08	ND<0.30	ND<0.08	ND<0.08
Benzo[g,h,i]perylene	NC	NC	NC	ND<20	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0
Benzo[k]fluoranthene	0.3	NC	NC	0.92	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Chrysene	NC	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
Dibenz[a,h]anthracene	NC	NC	NC	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50
Fluoranthene	3,700	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
Fluorene	140,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
Indeno[1,2,3-cd]pyrene	NC	NC	NC	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50
Phenanthrene	0.3	NC	NC	0.36	ND<0.077	0.11	ND<0.07	ND<0.077	ND<0.077	ND<0.07	ND<0.077	ND<0.077
Pyrene	110,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0
USEPA Method 8021B/8260 Volatile Organic Compounds (VOCs)												
Bromodichloromethane	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Chloroform	14,100	287	710	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethane	NC	34,600	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethene	96	1	6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
cis-1,2-Dichloroethene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
4-Isopropyltoluene	NC	NC	NC	NT	ND<1.0	ND<1.0	NT	ND<1.0	ND<1.0	NT	ND<1.0	ND<1.0
Tetrachloroethene	88	1,500	3,820	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1,1-Trichloroethane	62,000	20,400	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Trichloroethene	2,340	219	540	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0

Table 7
Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)								
		Residential	Industrial/ Commercial	MW-14S			MW-15			MW-16		
Sample Collection Date				6-19-98	5-31-01	9-13-01	6-18-98	5-30-01	9-13-01	6-18-98	5-30-01	9-13-01
Total Metals												
Arsenic	4	NC	NC	ND<50	ND<4	ND<4	ND<50	ND<4	ND<4	ND<50	ND<4	ND<4
Barium	NC	NC	NC	ND<500	120	220	ND<500	ND<50	ND<50	ND<500	ND<50	51
Cadmium	6	NC	NC	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Copper	48	NC	NC	NT	ND<40	ND<40	NT	ND<40	ND<40	NT	ND<40	ND<40
Lead	13	NC	NC	6J	ND<13	ND<13	ND<5	ND<13	ND<13	5J	ND<13	ND<13
Nickel	880	NC	NC	NT	ND<50	ND<50	NT	ND<50	ND<50	NT	ND<50	ND<50
Selenium	50	NC	NC	R	ND<10	ND<10	R	12	ND<10	R	ND<10	ND<10
Vanadium	NC	NC	NC	NT	NT	NT	NT	NT	NT	NT	NT	NT
Zinc	123	NC	NC	NT	NT	ND<10	NT	ND<10	ND<10	NT	ND<10	ND<10
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	NC	NC	NT	ND<100	ND<100	NT	ND<100	ND<100	NT	ND<100	ND<100

Notes:

- NC = No criterion established.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- ppb = parts per billion.
- µg/L = micrograms per liter (comparable to ppb).
- R = Analyte was tested for, but data validation findings indicate that the testing results are unusable
- J = based on QA/QC for that test.
- The reported concentration is an estimated quantity due to associated QA
- (1) = results found outside of recommended control limits.
- Duplicate sample for quality control (QC) purposes.
- ☐ = Concentration exceeds associated criterion.

**Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)							
		Residential	Industrial/ Commercial	MW-17D			MW-17S			MW-18	
Sample Collection Date				6-18-98	5-31-01	9-13-01	6-19-98	5-30-01	9-13-01	5-30-01	9-13-01
USEPA Method 8082 PolychlorinatedBiphenyls (PCBs)	0.5	NC	NC	NT	ND<0.50	ND<0.50	NT	ND<0.50	ND<0.50	ND<0.50	ND<0.50
USEPA Method 8270 Polynuclear Aromatics (PAHs)											
Acenaphthene	NC	NC	NC	ND<5.0	3.5	2.6	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Acenaphthylene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Anthracene	1,100,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Benzo[a]anthracene	0.3	NC	NC	ND<0.30	ND<0.06	ND<0.06	ND<0.30	ND<0.06	ND<0.06	ND<0.06	ND<0.06
Benzo[a]pyrene	0.3	NC	NC	ND<0.30	ND<0.20	ND<0.20	ND<0.30	ND<0.20	ND<0.20	ND<0.20	ND<0.20
Benzo[b]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.08	ND<0.08	ND<0.30	ND<0.08	ND<0.08	ND<0.08	ND<0.08
Benzo[g,h,i]perylene	NC	NC	NC	ND<20	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Benzo[k]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Chrysene	NC	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Dibenz[a,h]anthracene	NC	NC	NC	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Fluoranthene	3,700	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Fluorene	140,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Indeno[1,2,3-cd]pyrene	NC	NC	NC	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Phenanthrene	0.3	NC	NC	0.54	ND<0.077	ND<0.077	ND<0.07	0.71	ND<0.077	ND<0.077	ND<0.077
Pyrene	110,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
USEPA Method 8021B/8260 Volatile Organic Compounds (VOCs)											
Bromodichloromethane	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Chloroform	14,100	287	710	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethane	NC	34,600	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethene	96	1	6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
cis-1,2-Dichloroethene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
4-Isopropyltoluene	NC	NC	NC	NT	ND<1.0	ND<1.0	NT	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Tetrachloroethene	88	1,500	3,820	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1,1-Trichloroethane	62,000	20,400	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Trichloroethene	2,340	219	540	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0

Table 7
Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)							
		Residential	Industrial/ Commercial	MW-17D			MW-17S			MW-18	
Sample Collection Date				6-18-98	5-31-01	9-13-01	6-19-98	5-30-01	9-13-01	5-30-01	9-13-01
Total Metals											
Arsenic	4	NC	NC	ND<50	ND<4	ND<4	ND<50	ND<4	ND<4	ND<4	ND<4
Barium	NC	NC	NC	ND<500	110	120	ND<500	ND<50	80	ND<50	ND<50
Cadmium	6	NC	NC	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Copper	48	NC	NC	NT	ND<40	ND<40	NT	ND<40	ND<40	ND<40	ND<40
Lead	13	NC	NC	ND<5	ND<13	ND<13	ND<5	ND<13	ND<13	ND<13	ND<13
Nickel	880	NC	NC	NT	ND<50	ND<50	NT	ND<50	ND<50	ND<50	ND<50
Selenium	50	NC	NC	ND<10	26	ND<10	R	12	ND<10	11	ND<10
Vanadium	NC	NC	NC	NT	NT	NT	NT	NT	NT	NT	NT
Zinc	123	NC	NC	NT	ND<10	ND<10	NT	ND<10	ND<10	ND<10	ND<10
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	NC	NC	NT	170	ND<100	NT	ND<100	ND<100	ND<100	ND<100

Notes:

- NC = No criterion established.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- ppb = parts per billion.
- µg/L = micrograms per liter (comparable to ppb).
- R = Analyte was tested for, but data validation findings indicate that the testing results are unusable
- J = based on QA/QC for that test.
- The reported concentration is an estimated quantity due to associated QA
- (1) = results found outside of recommended control limits.
- Duplicate sample for quality control (QC) purposes.
- ☐ = Concentration exceeds associated criterion.

Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)						
		Residential	Industrial/ Commercial	MW-19			MW-20	MW-21		
Sample Collection Date				6-18-98	5-30-01	9-13-01	6-18-98	6-18-98	5-30-01	9-13-01
USEPA Method 8082 PolychlorinatedBiphenyls (PCBs)	0.5	NC	NC	NT	ND<0.50	ND<0.50	NT	ND<1.0	ND<0.50	ND<0.50
USEPA Method 8270 Polynuclear Aromatics (PAHs)										
Acenaphthene	NC	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<5.0	ND<1.0	ND<5.0
Acenaphthylene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<1.5
Anthracene	1,100,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<5.0	ND<1.0	ND<5.0
Benzo[a]anthracene	0.3	NC	NC	ND<0.30	ND<0.06	ND<0.06	ND<0.30	ND<0.30	ND<0.06	4.9
Benzo[a]pyrene	0.3	NC	NC	ND<0.30	ND<0.20	ND<0.20	ND<0.30	ND<0.30	ND<0.20	4.8
Benzo[b]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.08	ND<0.08	ND<0.30	ND<0.30	ND<0.08	6.8
Benzo[g,h,i]perylene	NC	NC	NC	ND<20	ND<1.0	ND<1.0	ND<20	ND<20	ND<1.0	ND<5.0
Benzo[k]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	3.7
Chrysene	NC	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<5.0	ND<1.0	5.2
Dibenz[a,h]anthracene	NC	NC	NC	ND<20	ND<0.50	ND<0.50	ND<20	ND<20	ND<0.50	ND<2.5
Fluoranthene	3,700	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<5.0	ND<1.0	13
Fluorene	140,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<5.0	ND<1.0	ND<5.0
Indeno[1,2,3-cd]pyrene	NC	NC	NC	ND<20	ND<0.50	ND<0.50	ND<20	ND<20	ND<0.50	ND<2.5
Phenanthrene	0.3	NC	NC	1.3	ND<0.077	ND<0.077	ND<0.07	ND<0.07	ND<0.077	1.8
Pyrene	110,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<5.0	ND<1.0	16
USEPA Method 8021B/8260 Volatile Organic Compounds (VOCs)										
Bromodichloromethane	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Chloroform	14,100	287	710	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethane	NC	34,600	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethene	96	1	6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
cis-1,2-Dichloroethene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
4-Isopropyltoluene	NC	NC	NC	NT	ND<1.0	ND<1.0	NT	NT	ND<1.0	ND<1.0
Tetrachloroethene	88	1,500	3,820	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1,1-Trichloroethane	62,000	20,400	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Trichloroethene	2,340	219	540	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0

Table 7

**Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)						
		Residential	Industrial/ Commercial	MW-19			MW-20	MW-21		
Sample Collection Date				6-18-98	5-30-01	9-13-01	6-18-98	6-18-98	5-30-01	9-13-01
Total Metals										
Arsenic	4	NC	NC	ND<50	ND<4	ND<4	ND<50	ND<50	ND<4	ND<4
Barium	NC	NC	NC	ND<500	ND<50	ND<50	ND<500	ND<500	ND<50	83
Cadmium	6	NC	NC	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Copper	48	NC	NC	NT	ND<40	ND<40	NT	NT	ND<40	ND<40
Lead	13	NC	NC	ND<5	ND<13	ND<13	ND<5	ND<5	ND<13	ND<13
Nickel	880	NC	NC	NT	ND<50	ND<50	NT	NT	ND<50	ND<50
Selenium	50	NC	NC	R	ND<10	ND<10	R	R	ND<10	ND<10
Vanadium	NC	NC	NC	NT	NT	NT	NT	NT	NT	NT
Zinc	123	NC	NC	NT	ND<10	ND<10	NT	NT	ND<10	ND<10
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	NC	NC	NT	ND<100	860	NT	NT	520	2,200

Notes:

- NC = No criterion established.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- ppb = parts per billion.
- µg/L = micrograms per liter (comparable to ppb).
- R = Analyte was tested for, but data validation findings indicate that the testing results are unusable
- J = based on QA/QC for that test.
The reported concentration is an estimated quantity due to associated QA
- (1) = results found outside of recommended control limits.
Duplicate sample for quality control (QC) purposes.
- ☐ = Concentration exceeds associated criterion.

**Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)								
		Residential	Industrial/ Commercial	MW-22			MW-50					
Sample Collection Date				6-18-98	5-31-01	9-11-01	3-14-00	6-20-00	9-25-00	12-18-00	6-1-01	9-12-01
USEPA Method 8082 PolychlorinatedBiphenyls (PCBs)	0.5	NC	NC	NT	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NT	ND<0.50
USEPA Method 8270 Polynuclear Aromatics (PAHs)												
Acenaphthene	NC	NC	NC	ND<5.0	ND<1.0	ND<1.0	NT	NT	NT	NT	ND<1.0	ND<1.0
Acenaphthylene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	NT	NT	NT	NT	ND<0.30	ND<0.30
Anthracene	1,100,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	NT	NT	NT	NT	ND<1.0	ND<1.0
Benzo[a]anthracene	0.3	NC	NC	ND<0.30	ND<0.06	ND<0.06	NT	NT	NT	NT	ND<0.06	ND<0.06
Benzo[a]pyrene	0.3	NC	NC	ND<0.30	ND<0.20	ND<0.20	NT	NT	NT	NT	ND<0.20	ND<0.20
Benzo[b]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.08	ND<0.08	NT	NT	NT	NT	ND<0.08	ND<0.08
Benzo[g,h,i]perylene	NC	NC	NC	ND<20	ND<1.0	ND<1.0	NT	NT	NT	NT	ND<1.0	ND<1.0
Benzo[k]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	NT	NT	NT	NT	ND<0.30	ND<0.30
Chrysene	NC	NC	NC	ND<5.0	ND<1.0	ND<1.0	NT	NT	NT	NT	ND<1.0	ND<1.0
Dibenz[a,h]anthracene	NC	NC	NC	ND<20	ND<0.50	ND<0.50	NT	NT	NT	NT	ND<0.50	ND<0.50
Fluoranthene	3,700	NC	NC	ND<5.0	ND<1.0	ND<1.0	NT	NT	NT	NT	ND<1.0	ND<1.0
Fluorene	140,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	NT	NT	NT	NT	ND<1.0	ND<1.0
Indeno[1,2,3-cd]pyrene	NC	NC	NC	ND<20	ND<0.50	ND<0.50	NT	NT	NT	NT	ND<0.50	ND<0.50
Phenanthrene	0.3	NC	NC	ND<0.07	ND<0.077	ND<0.077	NT	NT	NT	NT	ND<0.077	ND<0.077
Pyrene	110,000	NC	NC	ND<5.0	ND<1.0	ND<1.0	NT	NT	NT	NT	ND<1.0	ND<1.0
USEPA Method 8021B/8260 Volatile Organic Compounds (VOCs)												
Bromodichloromethane	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	NT	NT	NT	NT	ND<1.0	ND<1.0
Chloroform	14,100	287	710	ND<1.0	ND<1.0	ND<1.0	NT	NT	NT	NT	ND<1.0	ND<1.0
1,1-Dichloroethane	NC	34,600	50,000	ND<1.0	ND<1.0	ND<1.0	NT	NT	NT	NT	ND<1.0	2.1
1,1-Dichloroethene	96	1	6	ND<1.0	ND<1.0	ND<1.0	NT	NT	NT	NT	ND<1.0	ND<1.0
cis-1,2-Dichloroethene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	NT	NT	NT	NT	ND<1.0	ND<1.0
4-Isopropyltoluene	NC	NC	NC	NT	ND<1.0	ND<1.0	NT	NT	NT	NT	ND<1.0	ND<1.0
Tetrachloroethene	88	1,500	3,820	ND<1.0	ND<1.0	ND<1.0	NT	NT	NT	NT	ND<1.0	ND<1.0
1,1,1-Trichloroethane	62,000	20,400	50,000	ND<1.0	ND<1.0	ND<1.0	NT	NT	NT	NT	ND<1.0	ND<1.0
Trichloroethene	2,340	219	540	ND<1.0	ND<1.0	ND<1.0	NT	NT	NT	NT	ND<1.0	ND<1.0

Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)								
		Residential	Industrial/ Commercial	MW-22			MW-50					
Sample Collection Date				6-18-98	5-31-01	9-11-01	3-14-00	6-20-00	9-25-00	12-18-00	6-1-01	9-12-01
Total Metals												
Arsenic	4	NC	NC	ND<50	ND<4	ND<4	NT	NT	NT	NT	ND<4	ND<4
Barium	NC	NC	NC	ND<500	ND<50	ND<50	NT	NT	NT	NT	ND<50	59
Cadmium	6	NC	NC	ND<5	ND<5	ND<5	NT	NT	NT	NT	ND<5	ND<5
Copper	48	NC	NC	NT	ND<40	ND<40	NT	NT	NT	NT	ND<40	ND<40
Lead	13	NC	NC	ND<5	ND<13	ND<13	NT	NT	NT	NT	ND<13	ND<13
Nickel	880	NC	NC	NT	ND<50	ND<50	NT	NT	NT	NT	ND<50	ND<50
Selenium	50	NC	NC	ND<10	ND<10	ND<10	NT	NT	NT	NT	25	27
Vanadium	NC	NC	NC	NT	NT	NT	NT	NT	NT	NT	NT	NT
Zinc	123	NC	NC	NT	110	48	NT	NT	NT	NT	12	ND<10
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	NC	NC	NT	ND<100	ND<100	NT	NT	NT	NT	350	240

Notes:

- NC = No criterion established.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- ppb = parts per billion.
- µg/L = micrograms per liter (comparable to ppb).
- R = Analyte was tested for, but data validation findings indicate that the testing results are unusable
- J = based on QA/QC for that test.
- The reported concentration is an estimated quantity due to associated QA
- (1) = results found outside of recommended control limits.
- Duplicate sample for quality control (QC) purposes.
- ☐ = Concentration exceeds associated criterion.

Table 7

Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)						
		Residential	Industrial/ Commercial	MW-51						MW-51A ⁽¹⁾
Sample Collection Date				3-14-00	6-20-00	9-25-00	12-18-00	6-1-01	9-12-01	6-1-01
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	0.5	NC	NC	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
USEPA Method 8270 Polynuclear Aromatics (PAHs)										
Acenaphthene	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0
Acenaphthylene	0.3	NC	NC	NT	NT	NT	NT	ND<0.30	ND<0.30	ND<0.30
Anthracene	1,100,000	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0
Benzo[a]anthracene	0.3	NC	NC	NT	NT	NT	NT	ND<0.06	0.11	ND<0.06
Benzo[a]pyrene	0.3	NC	NC	NT	NT	NT	NT	ND<0.20	ND<0.20	ND<0.20
Benzo[b]fluoranthene	0.3	NC	NC	NT	NT	NT	NT	ND<0.08	0.18	ND<0.08
Benzo[g,h,i]perylene	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0
Benzo[k]fluoranthene	0.3	NC	NC	NT	NT	NT	NT	ND<0.30	ND<0.30	ND<0.30
Chrysene	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0
Dibenz[a,h]anthracene	NC	NC	NC	NT	NT	NT	NT	ND<0.50	ND<0.50	ND<0.50
Fluoranthene	3,700	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0
Fluorene	140,000	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0
Indeno[1,2,3-cd]pyrene	NC	NC	NC	NT	NT	NT	NT	ND<0.50	ND<0.50	ND<0.50
Phenanthrene	0.3	NC	NC	NT	NT	NT	NT	ND<0.077	0.08	ND<0.077
Pyrene	110,000	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0
USEPA Method 8021B/8260 Volatile Organic Compounds (VOCs)										
Bromodichloromethane	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0
Chloroform	14,100	287	710	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethane	NC	34,600	50,000	NT	NT	NT	NT	2.8	1.8	2.8
1,1-Dichloroethene	96	1	6	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0
cis-1,2-Dichloroethene	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0
4-Isopropyltoluene	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0
Tetrachloroethene	88	1,500	3,820	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0
1,1,1-Trichloroethane	62,000	20,400	50,000	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0
Trichloroethene	2,340	219	540	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0

Table 7
Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)						
		Residential	Industrial/ Commercial	MW-51						MW-51A ⁽¹⁾
Sample Collection Date				3-14-00	6-20-00	9-25-00	12-18-00	6-1-01	9-12-01	6-1-01
Total Metals										
Arsenic	4	NC	NC	NT	NT	NT	NT	ND<4	ND<4	ND<4
Barium	NC	NC	NC	NT	NT	NT	NT	67	84	64
Cadmium	6	NC	NC	NT	NT	NT	NT	ND<5	ND<5	ND<5
Copper	48	NC	NC	NT	NT	NT	NT	ND<40	ND<40	ND<40
Lead	13	NC	NC	NT	NT	NT	NT	ND<13	ND<13	ND<13
Nickel	880	NC	NC	NT	NT	NT	NT	ND<50	ND<50	ND<50
Selenium	50	NC	NC	NT	NT	NT	NT	30	43	33
Vanadium	NC	NC	NC	NT	NT	NT	NT	NT	NT	NT
Zinc	123	NC	NC	NT	NT	NT	NT	ND<10	ND<10	ND<10
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	NC	NC	NT	NT	NT	NT	2,300	800	2,500

Notes:

- NC = No criterion established.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- ppb = parts per billion.
- µg/L = micrograms per liter (comparable to ppb).
- R = Analyte was tested for, but data validation findings indicate that the testing results are unusable
- J = based on QA/QC for that test.
- The reported concentration is an estimated quantity due to associated QA
- (1) = results found outside of recommended control limits.
- Duplicate sample for quality control (QC) purposes.
- ☐ = Concentration exceeds associated criterion.

**Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)					
		Residential	Industrial/ Commercial	MW-52					
Sample Collection Date				3-14-00	6-20-00	9-25-00	12-18-00	5-31-01	9-13-01
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	0.5	NC	NC	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
USEPA Method 8270 Polynuclear Aromatics (PAHs)									
Acenaphthene	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0
Acenaphthylene	0.3	NC	NC	NT	NT	NT	NT	ND<0.30	ND<0.30
Anthracene	1,100,000	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0
Benzo[a]anthracene	0.3	NC	NC	NT	NT	NT	NT	ND<0.06	0.68
Benzo[a]pyrene	0.3	NC	NC	NT	NT	NT	NT	ND<0.20	0.73
Benzo[b]fluoranthene	0.3	NC	NC	NT	NT	NT	NT	ND<0.08	1.1
Benzo[g,h,i]perylene	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0
Benzo[k]fluoranthene	0.3	NC	NC	NT	NT	NT	NT	ND<0.30	0.61
Chrysene	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0
Dibenz[a,h]anthracene	NC	NC	NC	NT	NT	NT	NT	ND<0.50	ND<0.50
Fluoranthene	3,700	NC	NC	NT	NT	NT	NT	ND<1.0	1.8
Fluorene	140,000	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0
Indeno[1,2,3-cd]pyrene	NC	NC	NC	NT	NT	NT	NT	ND<0.50	ND<0.50
Phenanthrene	0.3	NC	NC	NT	NT	NT	NT	ND<0.077	0.39
Pyrene	110,000	NC	NC	NT	NT	NT	NT	ND<1.0	1.5
USEPA Method 8021B/8260 Volatile Organic Compounds (VOCs)									
Bromodichloromethane	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0
Chloroform	14,100	287	710	NT	NT	NT	NT	ND<1.0	ND<1.0
1,1-Dichloroethane	NC	34,600	50,000	NT	NT	NT	NT	1.7	4.2
1,1-Dichloroethene	96	1	6	NT	NT	NT	NT	1.7	ND<1.0
cis-1,2-Dichloroethene	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0
4-Isopropyltoluene	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0
Tetrachloroethene	88	1,500	3,820	NT	NT	NT	NT	1.9	1.2
1,1,1-Trichloroethane	62,000	20,400	50,000	NT	NT	NT	NT	16	14
Trichloroethene	2,340	219	540	NT	NT	NT	NT	ND<1.0	ND<1.0

Table 7

Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)					
		Residential	Industrial/ Commercial	MW-52					
Sample Collection Date				3-14-00	6-20-00	9-25-00	12-18-00	5-31-01	9-13-01
Total Metals									
Arsenic	4	NC	NC	NT	NT	NT	NT	ND<4	ND<4
Barium	NC	NC	NC	NT	NT	NT	NT	ND<50	ND<50
Cadmium	6	NC	NC	NT	NT	NT	NT	ND<5	ND<5
Copper	48	NC	NC	NT	NT	NT	NT	ND<40	ND<40
Lead	13	NC	NC	NT	NT	NT	NT	ND<13	ND<13
Nickel	880	NC	NC	NT	NT	NT	NT	ND<50	75
Selenium	50	NC	NC	NT	NT	NT	NT	45	ND<10
Vanadium	NC	NC	NC	NT	NT	NT	NT	NT	NT
Zinc	123	NC	NC	NT	NT	NT	NT	ND<10	60
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	NC	NC	NT	NT	NT	NT	960	1,500

Notes:

- NC = No criterion established.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- ppb = parts per billion.
- µg/L = micrograms per liter (comparable to ppb).
- R = Analyte was tested for, but data validation findings indicate that the testing results are unusable
- J = based on QA/QC for that test.
- The reported concentration is an estimated quantity due to associated QA
- (1) = results found outside of recommended control limits.
- Duplicate sample for quality control (QC) purposes.
- ☐ = Concentration exceeds associated criterion.

Table 7

**Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)							
		Residential	Industrial/ Commercial	MW-53						MW-A	
Sample Collection Date				3-14-00	6-20-00	9-25-00	12-18-00	6-1-01	9-12-01	6-1-01	9-12-01
USEPA Method 8082 PolychlorinatedBiphenyls (PCBs)	0.5	NC	NC	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
USEPA Method 8270 Polynuclear Aromatics (PAHs)											
Acenaphthene	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Acenaphthylene	0.3	NC	NC	NT	NT	NT	NT	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Anthracene	1,100,000	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Benzo[a]anthracene	0.3	NC	NC	NT	NT	NT	NT	ND<0.06	ND<0.06	ND<0.06	ND<0.06
Benzo[a]pyrene	0.3	NC	NC	NT	NT	NT	NT	ND<0.20	ND<0.20	ND<0.20	ND<0.20
Benzo[b]fluoranthene	0.3	NC	NC	NT	NT	NT	NT	ND<0.08	ND<0.08	ND<0.08	ND<0.08
Benzo[g,h,i]perylene	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Benzo[k]fluoranthene	0.3	NC	NC	NT	NT	NT	NT	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Chrysene	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Dibenz[a,h]anthracene	NC	NC	NC	NT	NT	NT	NT	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Fluoranthene	3,700	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Fluorene	140,000	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Indeno[1,2,3-cd]pyrene	NC	NC	NC	NT	NT	NT	NT	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Phenanthrene	0.3	NC	NC	NT	NT	NT	NT	ND<0.077	0.21	ND<0.077	ND<0.077
Pyrene	110,000	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0	ND<1.0
USEPA Method 8021B/8260 Volatile Organic Compounds (VOCs)											
Bromodichloromethane	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Chloroform	14,100	287	710	NT	NT	NT	NT	ND<1.0	ND<1.0	1.4	ND<1.0
1,1-Dichloroethane	NC	34,600	50,000	NT	NT	NT	NT	1.6	3.0	ND<1.0	ND<1.0
1,1-Dichloroethene	96	1	6	NT	NT	NT	NT	1.1	ND<1.0	ND<1.0	ND<1.0
cis-1,2-Dichloroethene	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0	ND<1.0
4-Isopropyltoluene	NC	NC	NC	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Tetrachloroethene	88	1,500	3,820	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1,1-Trichloroethane	62,000	20,400	50,000	NT	NT	NT	NT	12	ND<1.0	ND<1.0	ND<1.0
Trichloroethene	2,340	219	540	NT	NT	NT	NT	ND<1.0	ND<1.0	ND<1.0	ND<1.0

Table 7

Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)							
		Residential	Industrial/ Commercial	MW-53						MW-A	
Sample Collection Date				3-14-00	6-20-00	9-25-00	12-18-00	6-1-01	9-12-01	6-1-01	9-12-01
Total Metals											
Arsenic	4	NC	NC	NT	NT	NT	NT	ND<4	ND<4	ND<4	ND<4
Barium	NC	NC	NC	NT	NT	NT	NT	ND<50	52	110	95
Cadmium	6	NC	NC	NT	NT	NT	NT	ND<5	ND<5	ND<5	ND<5
Copper	48	NC	NC	NT	NT	NT	NT	ND<40	ND<40	ND<40	ND<40
Lead	13	NC	NC	NT	NT	NT	NT	ND<13	ND<13	ND<13	ND<13
Nickel	880	NC	NC	NT	NT	NT	NT	ND<50	ND<50	ND<50	ND<50
Selenium	50	NC	NC	NT	NT	NT	NT	29	22	16	12
Vanadium	NC	NC	NC	NT	NT	NT	NT	NT	NT	NT	NT
Zinc	123	NC	NC	NT	NT	NT	NT	20	ND<10	18	ND<10
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	NC	NC	NT	NT	NT	NT	790	200	ND<100	ND<100

Notes:

- NC = No criterion established.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- ppb = parts per billion.
- µg/L = micrograms per liter (comparable to ppb).
- R = Analyte was tested for, but data validation findings indicate that the testing results are unusable
- J = based on QA/QC for that test.
- The reported concentration is an estimated quantity due to associated QA
- (1) = results found outside of recommended control limits.
- Duplicate sample for quality control (QC) purposes.
- ☐ = Concentration exceeds associated criterion.

Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)							
		Residential	Industrial/ Commercial	MW-BD		MW-BS		MW-C		MW-D	
Sample Collection Date				5-31-01	9-13-01	5-31-01	9-11-01	5-29-01	9-11-01	5-29-01	9-11-01
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	0.5	NC	NC	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
USEPA Method 8270 Polynuclear Aromatics (PAHs)											
Acenaphthene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	3.0	ND<1.0	ND<1.0
Acenaphthylene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	0.42	ND<0.30	ND<0.30
Anthracene	1,100,000	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Benzo[a]anthracene	0.3	NC	NC	ND<0.06	ND<0.06	ND<0.06	ND<0.06	ND<0.06	0.99	ND<0.06	ND<0.06
Benzo[a]pyrene	0.3	NC	NC	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.20	0.78	ND<0.20	ND<0.20
Benzo[b]fluoranthene	0.3	NC	NC	ND<0.08	ND<0.08	ND<0.08	ND<0.08	ND<0.08	0.92	ND<0.08	ND<0.08
Benzo[g,h,i]perylene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Benzo[k]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	0.47	ND<0.30	ND<0.30
Chrysene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.0	ND<1.0	ND<1.0
Dibenz[a,h]anthracene	NC	NC	NC	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Fluoranthene	3,700	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	2.5	ND<1.0	ND<1.0
Fluorene	140,000	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	2.0	ND<1.0	ND<1.0
Indeno[1,2,3-cd]pyrene	NC	NC	NC	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.53	ND<0.50	ND<0.50
Phenanthrene	0.3	NC	NC	ND<0.077	ND<0.077	ND<0.077	0.14	0.16	3.2	ND<0.077	ND<0.077
Pyrene	110,000	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	2.1	ND<1.0	ND<1.0
USEPA Method 8021B/8260 Volatile Organic Compounds (VOCs)											
Bromodichloromethane	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Chloroform	14,100	287	710	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethane	NC	34,600	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethene	96	1	6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
cis-1,2-Dichloroethene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
4-Isopropyltoluene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Tetrachloroethene	88	1,500	3,820	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1,1-Trichloroethane	62,000	20,400	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Trichloroethene	2,340	219	540	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0

Table 7
Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)							
		Residential	Industrial/ Commercial	MW-BD		MW-BS		MW-C		MW-D	
Sample Collection Date				5-31-01	9-13-01	5-31-01	9-11-01	5-29-01	9-11-01	5-29-01	9-11-01
Total Metals											
Arsenic	4	NC	NC	ND<4	ND<4	ND<4	ND<4	ND<4	ND<4	ND<4	6
Barium	NC	NC	NC	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50
Cadmium	6	NC	NC	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Copper	48	NC	NC	ND<40	ND<40	ND<40	ND<40	71	ND<40	ND<40	ND<40
Lead	13	NC	NC	ND<13	ND<13	ND<13	ND<13	55	ND<13	ND<13	ND<13
Nickel	880	NC	NC	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50
Selenium	50	NC	NC	67	ND<10	ND<10	ND<10	58	ND<10	32	ND<10
Vanadium	NC	NC	NC	NT	NT	NT	NT	NT	NT	NT	NT
Zinc	123	NC	NC	ND<10	ND<10	75	140	220	38	ND<10	13
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	NC	NC	110	ND<100	ND<100	320	ND<100	160	ND<100	140

Notes:

- NC = No criterion established.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- ppb = parts per billion.
- µg/L = micrograms per liter (comparable to ppb).
- R = Analyte was tested for, but data validation findings indicate that the testing results are unusable
- J = based on QA/QC for that test.
The reported concentration is an estimated quantity due to associated QA
- (1) = results found outside of recommended control limits.
Duplicate sample for quality control (QC) purposes.
- ☐ = Concentration exceeds associated criterion.

Table 7

**Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)							
		Residential	Industrial/ Commercial	MW-E		MW-F		MW-G		MW-GA ⁽¹⁾	
Sample Collection Date				5-29-01	9-11-01	5-30-01	9-11-01	5-30-01	9-12-01	5-30-01	9-12-01
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	0.5	NC	NC	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
USEPA Method 8270 Polynuclear Aromatics (PAHs)											
Acenaphthene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	1.9	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Acenaphthylene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	0.47	ND<0.30	1.5	ND<0.30	ND<0.30
Anthracene	1,100,000	NC	NC	ND<1.0	ND<1.0	ND<1.0	1.2	ND<1.0	2.5	ND<1.0	ND<1.0
Benzo[a]anthracene	0.3	NC	NC	ND<0.06	0.28	ND<0.06	3.1	ND<0.06	10	ND<0.06	0.71
Benzo[a]pyrene	0.3	NC	NC	ND<0.20	ND<0.20	ND<0.20	3.0	ND<0.20	11	ND<0.20	0.72
Benzo[b]fluoranthene	0.3	NC	NC	ND<0.08	0.14	ND<0.08	3.4	ND<0.08	16	ND<0.08	1.0
Benzo[g,h,i]perylene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	2.1	ND<1.0	3.1	ND<1.0	ND<1.0
Benzo[k]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	1.4	ND<0.30	5.8	ND<0.30	0.37
Chrysene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	3.1	ND<1.0	9.8	ND<1.0	ND<1.0
Dibenz[a,h]anthracene	NC	NC	NC	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.85	ND<0.50	ND<0.50
Fluoranthene	3,700	NC	NC	ND<1.0	ND<1.0	ND<1.0	8.0	ND<1.0	19	ND<1.0	1.2
Fluorene	140,000	NC	NC	ND<1.0	ND<1.0	ND<1.0	2.1	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Indeno[1,2,3-cd]pyrene	NC	NC	NC	ND<0.50	ND<0.50	ND<0.50	2.0	ND<0.50	4.1	ND<0.50	ND<0.50
Phenanthrene	0.3	NC	NC	ND<0.077	0.22	0.27	6.7	ND<0.077	8.0	ND<0.077	0.47
Pyrene	110,000	NC	NC	ND<1.0	ND<1.0	ND<1.0	6.7	ND<1.0	20	ND<1.0	1.3
USEPA Method 8021B/8260 Volatile Organic Compounds (VOCs)											
Bromodichloromethane	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Chloroform	14,100	287	710	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethane	NC	34,600	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethene	96	1	6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
cis-1,2-Dichloroethene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
4-Isopropyltoluene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Tetrachloroethene	88	1,500	3,820	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1,1-Trichloroethane	62,000	20,400	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Trichloroethene	2,340	219	540	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0

Table 7
Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)							
		Residential	Industrial/Commercial	MW-E		MW-F		MW-G		MW-GA ⁽¹⁾	
Sample Collection Date				5-29-01	9-11-01	5-30-01	9-11-01	5-30-01	9-12-01	5-30-01	9-12-01
Total Metals											
Arsenic	4	NC	NC	ND<4	ND<4	ND<4	5	ND<4	ND<4	ND<4	ND<4
Barium	NC	NC	NC	57	73	ND<50	ND<50	130	140	130	140
Cadmium	6	NC	NC	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Copper	48	NC	NC	ND<40	ND<40	ND<40	ND<40	ND<40	ND<40	ND<40	ND<40
Lead	13	NC	NC	ND<13	ND<13	ND<13	ND<13	14	ND<13	ND<13	ND<13
Nickel	880	NC	NC	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50
Selenium	50	NC	NC	21	ND<10	22	ND<10	16	13	17	14
Vanadium	NC	NC	NC	NT	NT	NT	NT	NT	NT	NT	NT
Zinc	123	NC	NC	ND<10	ND<10	70	ND<10	ND<10	ND<10	ND<10	ND<10
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	NC	NC	ND<100	ND<100	330	180	ND<100	ND<100	ND<100	110

Notes:

- NC = No criterion established.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- ppb = parts per billion.
- µg/L = micrograms per liter (comparable to ppb).
- R = Analyte was tested for, but data validation findings indicate that the testing results are unusable
- J = based on QA/QC for that test.
- The reported concentration is an estimated quantity due to associated QA
- (1) = results found outside of recommended control limits.
- Duplicate sample for quality control (QC) purposes.
- ☐ = Concentration exceeds associated criterion.

TABLE 7

**Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)								
		Residential	Industrial/ Commercial	MW-H		MW-I		MW-J		MW-K		MW-L
Sample Collection Date				5-29-01	9-13-01	5-29-01	9-14-01	7-25-01	9-11-01	7-25-01	9-11-01	10-15-02
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	0.5	NC	NC	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
USEPA Method 8270 Polynuclear Aromatics (PAHs)												
Acenaphthene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Acenaphthylene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Anthracene	1,100,000	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Benzo[a]anthracene	0.3	NC	NC	ND<0.06	ND<0.06	ND<0.06	ND<0.06	ND<0.06	0.06	0.59	0.60	ND<0.06
Benzo[a]pyrene	0.3	NC	NC	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.20	0.48	0.43	ND<0.20
Benzo[b]fluoranthene	0.3	NC	NC	ND<0.08	ND<0.08	ND<0.08	ND<0.08	ND<0.08	0.09	0.63	0.46	ND<0.08
Benzo[g,h,i]perylene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Benzo[k]fluoranthene	0.3	NC	NC	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	0.30	ND<0.30
Chrysene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Dibenz[a,h]anthracene	NC	NC	NC	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Fluoranthene	3,700	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.1	ND<1.0	ND<1.0
Fluorene	140,000	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Indeno[1,2,3-cd]pyrene	NC	NC	NC	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Phenanthrene	0.3	NC	NC	ND<0.077	ND<0.077	ND<0.077	ND<0.077	0.17	0.09	0.52	0.16	ND<0.077
Pyrene	110,000	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.3	ND<1.0	ND<1.0
USEPA Method 8021B/8260 Volatile Organic Compounds (VOCs)												
Bromodichloromethane	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<0.50
Chloroform	14,100	287	710	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethane	NC	34,600	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethene	96	1	6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
cis-1,2-Dichloroethene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
4-Isopropyltoluene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	15
Tetrachloroethene	88	1,500	3,820	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1,1-Trichloroethane	62,000	20,400	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Trichloroethene	2,340	219	540	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0

Table 7
Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)								
		Residential	Industrial/ Commercial	MW-H		MW-I		MW-J		MW-K		MW-L
Sample Collection Date				5-29-01	9-13-01	5-29-01	9-14-01	7-25-01	9-11-01	7-25-01	9-11-01	10-15-02
Total Metals												
Arsenic	4	NC	NC	ND<4	ND<4	ND<4	ND<4	ND<4	ND<4	ND<4	ND<4	ND<4
Barium	NC	NC	NC	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	72	71	ND<50
Cadmium	6	NC	NC	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Copper	48	NC	NC	ND<40	ND<40	ND<40	ND<40	ND<40	ND<40	ND<40	ND<40	ND<40
Lead	13	NC	NC	ND<13	ND<13	ND<13	ND<13	ND<13	ND<13	19	ND<13	ND<13
Nickel	880	NC	NC	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50
Selenium	50	NC	NC	23	ND<10	18	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Vanadium	NC	NC	NC	NT	NT	NT	NT	NT	NT	NT	NT	ND<50
Zinc	123	NC	NC	ND<10	ND<10	18	18	25	ND<10	46	ND<10	13
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	NC	NC	220	ND<100	200	200	480	ND<100	250	150	330

Notes:

- NC = No criterion established.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- ppb = parts per billion.
- µg/L = micrograms per liter (comparable to ppb).
- R = Analyte was tested for, but data validation findings indicate that the testing results are unusable
- J = based on QA/QC for that test.
- The reported concentration is an estimated quantity due to associated QA
- (1) = results found outside of recommended control limits.
- Duplicate sample for quality control (QC) purposes.
- ☐ = Concentration exceeds associated criterion.

**Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)					
		Residential	Industrial/ Commercial	MW-M	MW-N	MW-O	MW-P	RW-1 (6-in.)	
Sample Collection Date				10-15-02	10-15-02	10-15-02	10-15-02	6-1-01	9-12-01
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	0.5	NC	NC	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
USEPA Method 8270 Polynuclear Aromatics (PAHs)									
Acenaphthene	NC	NC	NC	1.6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Acenaphthylene	0.3	NC	NC	0.74	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Anthracene	1,100,000	NC	NC	2.4	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Benzo[a]anthracene	0.3	NC	NC	3.4	0.70	ND<0.06	ND<0.06	ND<0.06	ND<0.06
Benzo[a]pyrene	0.3	NC	NC	3.9	0.69	ND<0.20	ND<0.20	ND<0.20	ND<0.20
Benzo[b]fluoranthene	0.3	NC	NC	4.3	0.79	ND<0.08	ND<0.08	ND<0.08	ND<0.08
Benzo[g,h,i]perylene	NC	NC	NC	2.2	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Benzo[k]fluoranthene	0.3	NC	NC	1.8	0.38	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Chrysene	NC	NC	NC	5.3	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Dibenz[a,h]anthracene	NC	NC	NC	0.67	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Fluoranthene	3,700	NC	NC	11	1.3	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Fluorene	140,000	NC	NC	1.7	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Indeno[1,2,3-cd]pyrene	NC	NC	NC	2.5	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Phenanthrene	0.3	NC	NC	6.2	0.81	ND<0.077	ND<0.077	ND<0.077	ND<0.077
Pyrene	110,000	NC	NC	9.3	1.6	ND<1.0	ND<1.0	ND<1.0	ND<1.0
USEPA Method 8021B/8260 Volatile Organic Compounds (VOCs)									
Bromodichloromethane	NC	NC	NC	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<1.0
Chloroform	14,100	287	710	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1-Dichloroethane	NC	34,600	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	3.0	4.5
1,1-Dichloroethene	96	1	6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
cis-1,2-Dichloroethene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
4-Isopropyltoluene	NC	NC	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Tetrachloroethene	88	1,500	3,820	3.1	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,1,1-Trichloroethane	62,000	20,400	50,000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.7	ND<1.0
Trichloroethene	2,340	219	540	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0

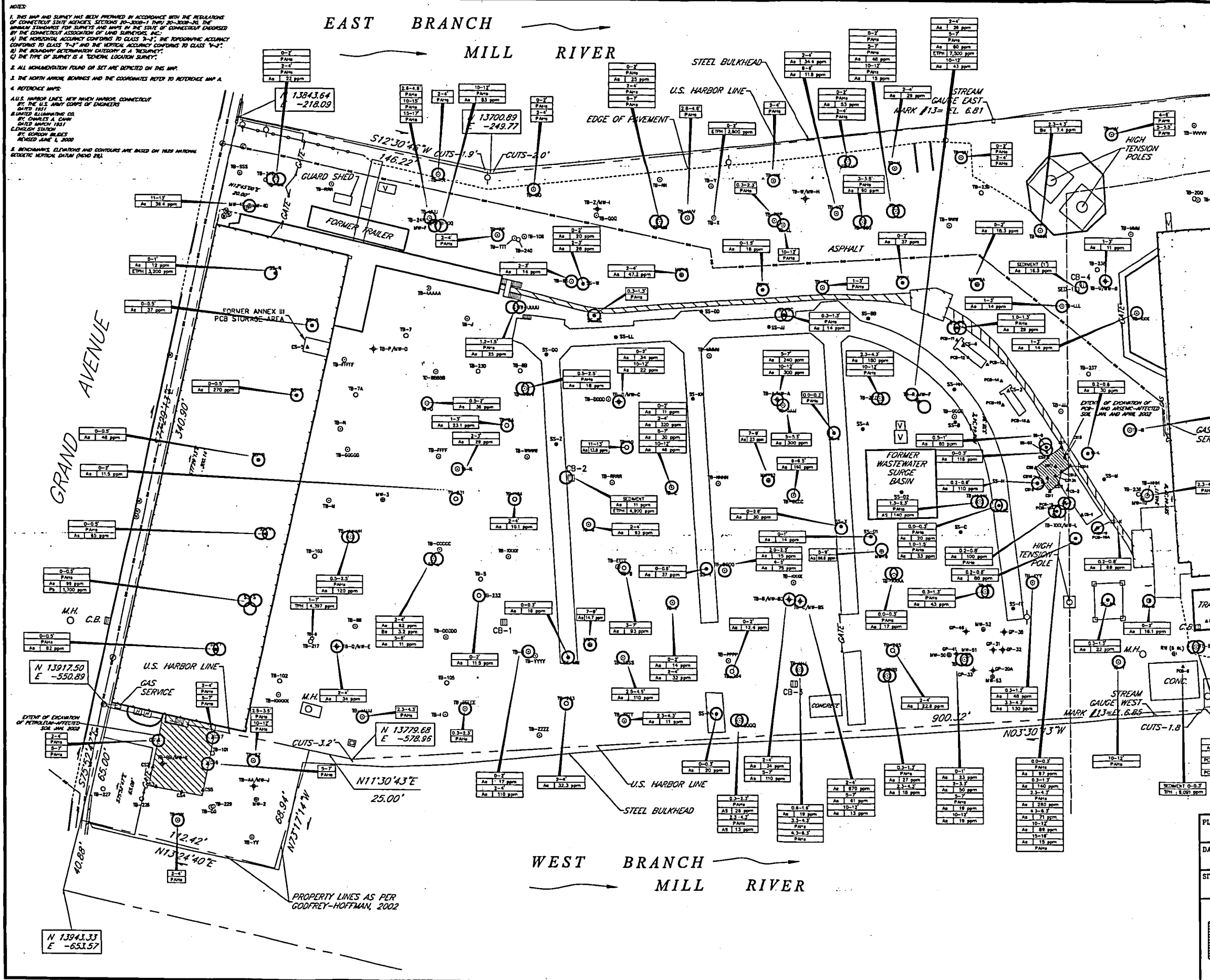
**Comparison of Ground Water Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT**

Analyte	Surface Water Protection Criteria (µg/L)	Volatilization Criteria for Ground Water (ppb)		Ground Water Sample Concentrations (ppb)					
		Residential	Industrial/ Commercial	MW-M	MW-N	MW-O	MW-P	RW-1 (6-in.)	
Sample Collection Date				10-15-02	10-15-02	10-15-02	10-15-02	6-1-01	9-12-01
Total Metals									
Arsenic	4	NC	NC	ND<4	ND<4	ND<4	ND<4	ND<4	ND<4
Barium	NC	NC	NC	ND<50	210	66	57	ND<50	ND<50
Cadmium	6	NC	NC	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Copper	48	NC	NC	ND<40	ND<40	ND<40	ND<40	ND<40	ND<40
Lead	13	NC	NC	ND<13	ND<13	ND<13	ND<13	ND<13	ND<13
Nickel	880	NC	NC	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50
Selenium	50	NC	NC	ND<10	ND<10	ND<10	ND<10	16	15
Vanadium	NC	NC	NC	ND<50	ND<50	ND<50	250	NT	NT
Zinc	123	NC	NC	ND<10	ND<10	17	ND<10	290	300
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	NC	NC	1,000	4,400	ND<100	ND<100	520	360

Notes:

- NC = No criterion established.
- ND = Not detected above laboratory minimum detection limit.
- NT = Not tested.
- ppb = parts per billion.
- µg/L = micrograms per liter (comparable to ppb).
- R = Analyte was tested for, but data validation findings indicate that the testing results are unusable
- J = based on QA/QC for that test.
The reported concentration is an estimated quantity due to associated QA
- (1) = results found outside of recommended control limits.
Duplicate sample for quality control (QC) purposes.
- ☐ = Concentration exceeds associated criterion.

NOTES:
 1. THIS MAP AND SURVEY HAS BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-200B-1 THRU 20-200B-10, THE ANNUAL STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC.
 A) THE HORIZONTAL ACCURACY CONFORMS TO CLASS 7-3, THE TOPOGRAPHIC ACCURACY CONFORMS TO CLASS 7-3 AND THE VERTICAL ACCURACY CONFORMS TO CLASS 7-3.
 B) THE BOUNDARY DETERMINATION CATEGORY IS A "RESURVEY".
 C) THE TYPE OF SURVEY IS A "GENERAL LOCATION SURVEY".
 2. ALL MONUMENTATION FOUND OR SET ARE DEPICTED ON THIS MAP.
 3. THE NORTH ARROW, BOUNDARIES AND THE COORDINATES REFER TO REFERENCE MAP A.
 4. REFERENCE MAPS:
 A) U.S. HARBOR LINES, NEW HAVEN HARBOR, CONNECTICUT BY THE U.S. ARMY CORPS OF ENGINEERS DATED 1951
 B) LIMITED ILLUMINATING CO. BY CHARLES A. CARR DATED MARCH 1951
 C) LENOX STATION BY GEORGE B. BILES RELEASED JUNE 4, 2000
 5. BOUNDARIES, ELEVATIONS AND COORDINATES ARE BASED ON NAD 83 NATIONAL GEODETIC DATUM (NAD 83).



GENERAL NOTES:
 1. GROUND WATER MONITORING WELLS MW-1, MW-2, MW-6 AND MW-20 INSTALLED BY GEI WERE NOT LOCATED.
 2. RED SAMPLE POINTS REPRESENT SAMPLES NOT LOCATED BY SURVEYOR AND HAVE BEEN LOCATED USING FIELD MEASUREMENTS OR INFORMATION PROVIDED BY GEI.

LEGEND
 SED-1 □ SEDIMENT SAMPLE COLLECTED BY GEI
 PCB-1, PCB-2, PCB-3 □ SURFACE SOIL SAMPLE COLLECTED BY GEI
 HA-1 □ HAND AUGER SOIL SAMPLE COLLECTED BY GEI
 CS-1 □ CONCRETE CHIP SAMPLE COLLECTED BY GEI
 SS-A □ SURFACE SOIL SAMPLE COLLECTED BY AEI
 CSI-A □ CONFIRMATION SOIL SAMPLE COLLECTED BY AEI
 TB-AO □ TEST BORING INSTALLED BY AEI
 TB-1O □ TEST BORING INSTALLED BY GEI
 TB-W/MW-H □ GROUND WATER MONITORING WELL INSTALLED BY AEI
 MW-1O □ GROUND WATER MONITORING WELL INSTALLED BY OTHERS
 GP-4 □ GEOPROBE GROUND WATER MONITORING WELL INSTALLED BY OTHERS
 RED SAMPLE POINTS REPRESENT SAMPLES NOT LOCATED BY SURVEYOR AND HAVE BEEN LOCATED USING FIELD MEASUREMENTS OR INFORMATION PROVIDED BY GEI.
 GROUND WATER MONITORING WELLS MW-1, MW-2, MW-6 AND MW-20 INSTALLED BY GEI ARE NOT PRESENT.

KEY TO ANALYTICAL RESULTS
 0.2-0.8' — SAMPLE DEPTH BELOW GRADE IN FEET
 As 30 ppm — CONSTITUENT/CONCENTRATION IN PPM
 ppm PARTS PER MILLION
 As ARSENIC
 Pb LEAD
 PCBs POLYCHLORINATED BIPHENYLS
 Be BERYLLIUM
 ETPH/TPH EXTRACTABLE TOTAL PETROLEUM HYDROCARBONS/ TOTAL PETROLEUM HYDROCARBONS
 PAHs POLYAROMATIC HYDROCARBONS
 NOTES:
 1. ONLY CONCENTRATIONS ABOVE OR ANALYTES THAT EXCEED RECOMMENDED STANDARD REGULATIONS (RSR) INDUSTRIAL/COMMERCIAL (I/C) DIRECT EXPOSURE CRITERIA (DEC) ARE SHOWN.
 2. A CIRCLED CIRCLE AROUND SAMPLE LOCATION INDICATES EXCEEDANCE OF THE I/C DEC OF THE ASSOCIATED ANALYTE.

BASE MAP TAKEN FROM:
 GENERAL LOCATION SURVEY
 PROPERTY OF
 QUINNIPIAC ENERGY, LLC
 310 GRAND AVENUE
 NEW HAVEN, CONNECTICUT
 SCALE: 1"=40' JANUARY 4, 2002
 GODFREY-HOFFMAN ASSOCIATES, LLC
 PROFESSIONAL LAND SURVEYORS, ENGINEERS & DESIGNERS
 801 DUFFELL AVENUE - SUITE 1901 HARTFORD, CONNECTICUT 06115
 860.518 FAX: 860-448-4217 FAX: 860-448-6381
 www.godfreyhoffman.com
 PROJECT: 01-148 SHEET 1 OF 1

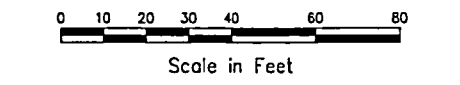
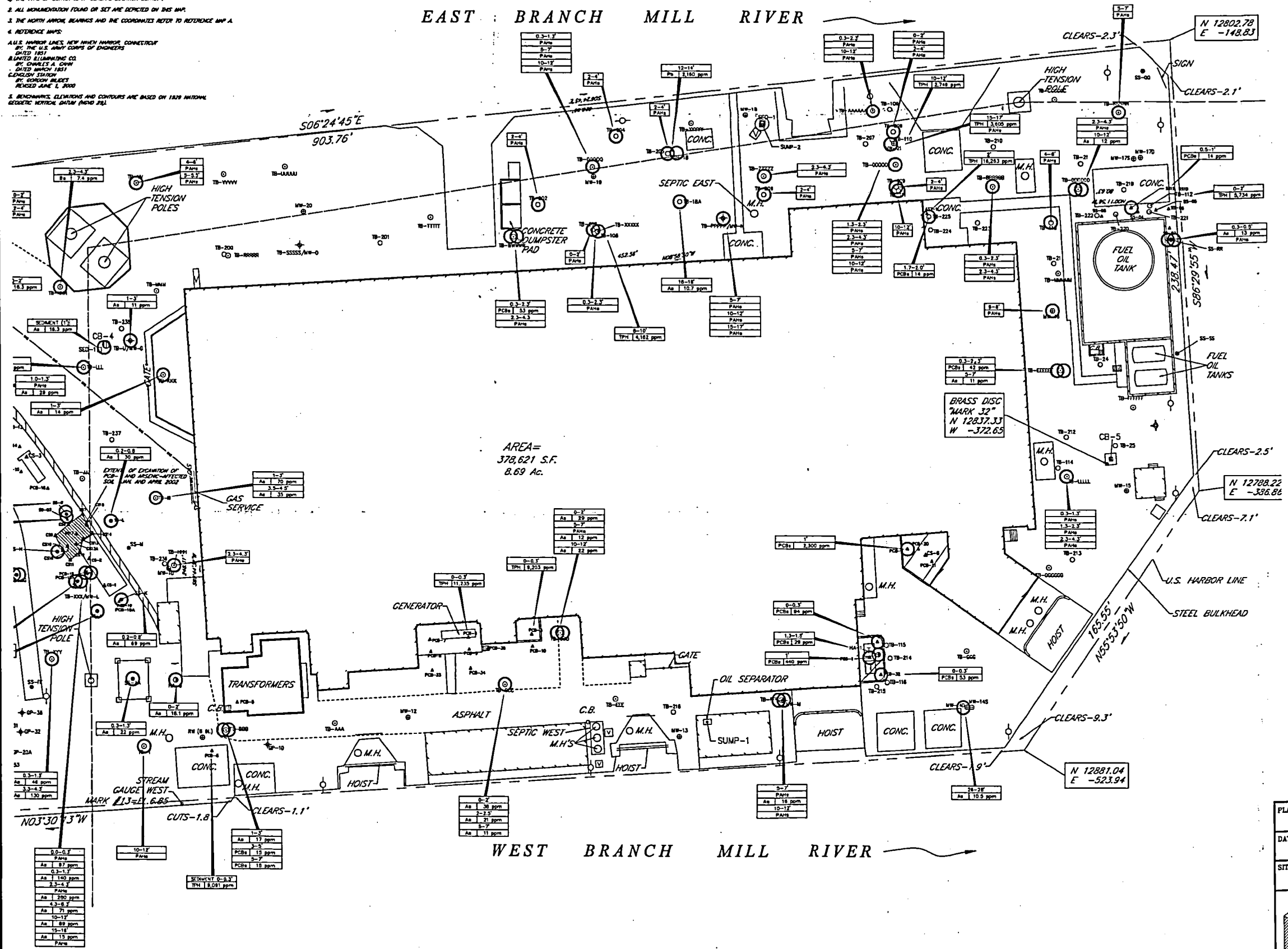


PLATE 3-2a	SOIL SAMPLE ANALYTICAL SUMMARY (NORTHERN PORTION OF SITE): EXCEEDANCES OF INDUSTRIAL/COMMERCIAL DIRECT EXPOSURE CRITERIA	
DATE 1/17/03	PREPARED FOR QUINNIPIAC ENERGY LLC ENGLISH STATION, NEW HAVEN, CT	
SITE ID. -		
	PROJECT No. AEI-00T-030	DRAWING No. 00T-03C.1
	DRAWN BY J.J.S.	CHECKED BY T.N.W.
	SIZE D	SCALE AS SHOWN
	8 Old Indian Trail Middlefield, CT 06455	

NOTES:

1. THIS MAP AND SURVEY HAS BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 30-300B-1 (PART 30-300B-1), THE AGENCY STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT, ENFORCED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC.
2. THE HORIZONTAL ACCURACY CONFORMS TO CLASS 3-A, THE TOPOGRAPHIC ACCURACY CONFORMS TO CLASS 3-A, AND THE VERTICAL ACCURACY CONFORMS TO CLASS 3-A.
3. THE TYPE OF SURVEY IS A "GENERAL LOCATION SURVEY".
4. ALL MONUMENTATION FOUND OR SET ARE DEPICTED ON THIS MAP.
5. THE NORTH ARROW, BEARINGS AND THE COORDINATES REFER TO REFERENCE MAP A.
6. REFERENCE MAPS:
A.U.S. HARBOR LINES, NEW HAVEN HARBOR, CONNECTICUT
BY THE U.S. ARMY CORPS OF ENGINEERS
DATED 1951
BLUNTED ILLUMINATING CO.
BY CHARLES A. COHN
DATED MARCH 1951
COLUMBIAN STATION
BY GEORGE HUBERT
REVISED JUNE 1, 2000
7. BENCHMARKS, ELEVATIONS AND COORDINATES ARE BASED ON 1983 NATIONAL GEODETIC VERTICAL DATUM (NGVD 83).



GENERAL NOTES:

1. GROUND WATER MONITORING WELLS MW-1, MW-2, MW-6 AND MW-20 INSTALLED BY GEI WERE NOT LOCATED.
2. RED SAMPLE POINTS REPRESENT SAMPLES NOT LOCATED BY SURVEYOR AND HAVE BEEN LOCATED USING FIELD MEASUREMENTS OR INFORMATION PROVIDED BY GEI.

LEGEND

SED-1 □ SEDIMENT SAMPLE COLLECTED BY GEI
 PS-1, PS-2, PS-3 □ SURFACE SOIL SAMPLE COLLECTED BY GEI
 HA-1 □ HAND AUGER SOIL SAMPLE COLLECTED BY GEI
 CS-1 □ CONCRETE CHIP SAMPLE COLLECTED BY GEI
 SS-A □ SURFACE SOIL SAMPLE COLLECTED BY AEI
 CS1 □ CONFIRMATION SOIL SAMPLE COLLECTED BY AEI
 TB-A □ TEST BORING INSTALLED BY AEI
 TB-1 □ TEST BORING INSTALLED BY GEI
 TB-W/MW-H □ GROUND WATER MONITORING WELL INSTALLED BY AEI
 MW-1 □ GROUND WATER MONITORING WELL INSTALLED BY OTHERS
 GP-4 □ GEOPROBE GROUND WATER MONITORING WELL INSTALLED BY OTHERS

RED SAMPLE POINTS REPRESENT SAMPLES NOT LOCATED BY SURVEYOR AND HAVE BEEN LOCATED USING FIELD MEASUREMENTS OR INFORMATION PROVIDED BY GEI.

GROUND WATER MONITORING WELLS MW-1, MW-2, MW-6 AND MW-20 INSTALLED BY GEI ARE NOT PRESENT.

KEY TO ANALYTICAL RESULTS

0.2-0.8' — SAMPLE DEPTH BELOW GRADE IN FEET
 As 30 ppm — CONSTITUENT/CONCENTRATION IN PPM

ppm PARTS PER MILLION
 As ○ ARSENIC
 Pb ○ LEAD
 PCBs ○ POLYCHLORINATED BIPHENYLS
 Be ○ BERYLLIUM
 ETHP/TPH — EXTRACTABLE TOTAL PETROLEUM HYDROCARBONS/
 TOTAL PETROLEUM HYDROCARBONS
 PAHs ○ POLYAROMATIC HYDROCARBONS

NOTES:

1. ONLY CONCENTRATIONS ABOVE OR ANALYTES THAT EXCEED RECOMMENDATION STANDARD REGULATIONS (RSRs) INDUSTRIAL/COMMERCIAL (I/C) DIRECT EXPOSURE CRITERIA (DEC) ARE SHOWN.
2. A COLORED CIRCLE AROUND SAMPLE LOCATION INDICATES EXCEEDANCE OF THE I/C DEC OF THE ASSOCIATED ANALYTE.

BASF MAP TAKEN FROM:
 GENERAL LOCATION SURVEY
 PROPERTY OF
QUINPIAC ENERGY, LLC
 310 GRAND AVENUE
 NEW HAVEN, CONNECTICUT
 SCALE: 1"=40' JANUARY 4, 2002

GODFREY-HOFFMAN ASSOCIATES, LLC
 PROFESSIONAL LAND SURVEYORS, ENGINEERS & DESIGNERS
 801 DIXWELL AVENUE - SUITE #301 HARTFORD, CONNECTICUT
 06103 PH: 863-848-4217 FAX: 863-848-4381
 www.godfreysouth.com
 PROJECT: 01-108 SHEET 1 OF 1

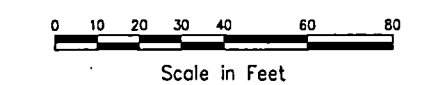


PLATE 3-2b	SOIL SAMPLE ANALYTICAL SUMMARY (SOUTHERN PORTION OF SITE): EXCEEDANCES OF INDUSTRIAL/COMMERCIAL DIRECT EXPOSURE CRITERIA	
DATE 1/17/02	PREPARED FOR QUINPIAC ENERGY LLC ENGLISH STATION, NEW HAVEN, CT	
SITE ID. -		
	PROJECT No. AEI-00T-030	DRAWING No. 00T-03C.2
	DRAWN BY J.J.S.	CHECKED BY T.N.W.
	SIZE D	SCALE AS SHOWN

Table D-1

GROUND WATER SAMPLING RESULTS FOR SEVEN STATION B PARCEL WELLS

Analyte	Surface Water Protection Criteria (µg/L)	Ground Water Sample Concentrations (ppb)							
		MW-04S		MW-05			MW-06S		
Sample Collection Date		6-18-98	5-31-01	9-14-01	6-18-98	5-30-01	9-14-01	5-31-01	9-11-01
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	0.5	NT	ND<0.50	ND<0.50	NT	ND<0.50	ND<0.50	ND<0.50	ND<0.50
USEPA Method 8270 Polynuclear Aromatics (PAHs)									
Acenaphthene	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Acenaphthylene	0.3	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Benzo[a]anthracene	0.3	ND<0.30	ND<0.06	ND<0.06	ND<0.30	ND<0.06	ND<0.06	ND<0.06	ND<0.06
Benzo[a]pyrene	0.3	ND<0.30	ND<0.20	ND<0.20	ND<0.30	ND<0.20	ND<0.20	ND<0.20	ND<0.20
Benzo[b]fluoranthene	0.3	ND<0.30	ND<0.08	ND<0.08	ND<0.30	ND<0.08	ND<0.08	ND<0.08	ND<0.08
Benzo[g,h,i]perylene	NC	ND<20	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Benzo[k]fluoranthene	0.3	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Chrysene	NC	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Fluoranthene	3,700	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Fluorene	140,000	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Indeno[1,2,3-cd]pyrene	NC	ND<20	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Phenanthrene	0.3	ND<0.07	ND<0.07	ND<0.07	ND<0.07	ND<0.07	ND<0.07	ND<0.07	0.14
Pyrene	110,000	ND<5.0	ND<1.0	ND<1.0	ND<5.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
USEPA Method 8021B/8260 Volatile Organic Compounds (VOCs)									
Chloroform	14,100	ND<1.0	ND<1.0	ND<1.0	4.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Total Metals									
Arsenic	4	ND<50	ND<4	ND<4	ND<50	ND<50	ND<50	ND<4	ND<4
Barium	NC	ND<500	ND<50	81	ND<500	ND<50	ND<50	ND<50	ND<50
Copper	48	NT	ND<78	ND<40	NT	ND<40	ND<40	ND<40	ND<40
Lead	13	ND<5	ND<13	ND<13	ND<22	ND<13	ND<13	ND<13	ND<13
Selenium	50	ND<10	ND<10	ND<10	ND<10	14	ND<10	ND<10	ND<10
Zinc	123	NT	120	40	NT	ND<10	ND<10	75	140
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	NT	ND<100	ND<100	NT	ND<100	ND<100	ND<100	320

NC	=	No criterion established.
ND	=	Not detected above laboratory minimum detection limit.
NT	=	Not tested.
ppb	=	parts per billion.
µg/L	=	micrograms per liter (comparable to ppb).
(1)	=	Duplicate sample for quality control (QC) purposes.
-	=	Concentration exceeds associated criterion.

Note 1: Other monitoring wells exist on the Station B Parcel; sample results for those are all included in the previous report documenting widespread polluted fill.

Note 2: Other analytes on the 8260 and 8270 scans, and ten other metals, were tested for, but are not included in this table because there were no hits in any of these seven monitoring wells.

Table D-1 (cont)

Analyte	Surface Water Protection Criteria (µg/L)	Ground Water Sample Concentrations (ppb)							
		MW-C		MW-D		MW-E		MW-K	
Sample Collection Date		5-29-01	9-11-01	5-29-01	9-11-01	5-29-01	9-11-01	3-14-01	9-11-01
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	0.5	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
USEPA Method 8270 Polynuclear Aromatics (PAHs)									
Acenaphthene	NC	ND<1.0	3.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Acenaphthylene	0.3	ND<0.30	0.42	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30
Benzo[a]anthracene	0.3	ND<0.06	0.99	ND<0.06	ND<0.06	ND<0.06	0.28	0.59	0.60
Benzo[a]pyrene	0.3	ND<0.20	0.78	ND<0.20	ND<0.20	ND<0.20	ND<0.20	0.48	0.43
Benzo[b]fluoranthene	0.3	ND<0.08	0.92	ND<0.08	ND<0.08	ND<0.08	0.14	0.63	0.48
Benzo[g,h,i]perylene	NC	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Benzo[k]fluoranthene	0.3	ND<0.30	0.47	ND<0.30	ND<0.30	ND<0.30	ND<0.30	ND<0.30	0.30
Chrysene	NC	ND<1.0	1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Fluoranthene	3,700	ND<1.0	2.5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.1	ND<1.0
Fluorene	140,000	ND<1.0	2.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Indeno[1,2,3-cd]pyrene	NC	ND<0.50	0.53	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Phenanthrene	0.3	0.16	3.2	ND<0.07	ND<0.07	ND<0.07	0.22	0.52	0.16
Pyrene	110,000	ND<1.0	2.1	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.3	ND<1.0
USEPA Method 821B/8260 Volatile Organic Compounds (VOCs)									
Chloroform	14,100	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Total Metals									
Arsenic	4	ND<4	ND<4	ND<4	ND<4	ND<4	ND<4	ND<4	ND<4
Barium	NC	ND<50	ND<50	ND<50	ND<50	57	73	72	71
Copper	48	71	ND<40	ND<40	ND<40	ND<40	ND<40	ND<40	ND<40
Lead	13	55	ND<13	ND<13	ND<13	ND<13	ND<13	19	ND<13
Selenium	50	58	ND<10	32	ND<10	21	ND<10	ND<10	ND<10
Zinc	123	220	38	ND<10	13	ND<10	ND<10	46	ND<10
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	NC	ND<100	160	ND<100	140	ND<100	ND<100	250	150

NC	=	No criterion established.
ND	=	Not detected above laboratory minimum detection limit.
NT	=	Not tested.
ppb	=	parts per billion.
µg/L	=	micrograms per liter (comparable to ppb).
(1)	=	Duplicate sample for quality control (QC) purposes.
>C	=	Concentration exceeds associated criterion.

Note: Other monitoring wells exist on the Station B Parcel; sample results for those are all included in the previous report documenting widespread polluted fill.

Note 2: Other analytes on the 8260 and 8270 scans, and ten other metals, were tested for, but are not included in this table because there were no hits in any of these seven monitoring wells.

Table 1
PCB Cleanup Specifications for Historical Spills at QE English Station

Federal Regulation Matrix				
Nature of Usage / Access (a)	Nature of PCB Matrix Material	Cleanup Options (b)	Numerical PCB Decon Specification (c)	Citation (40 CFR 761...)
High occupancy (worker presence ≥840 hr/yr or ≥16.8 hr/wk)	Non-porous	Wash and rinse surface, dispose of waste solution	10 µg/100 cm ² on wipe sample	61(a)(4)(ii)
	Concrete (or other porous)	Scarify concrete surface, dispose of waste concrete	1 ppm in concrete remaining	61(a)(4)(iii); 61(a)(4)(i)(A)
		Encapsulate with soil/asphalt/concrete (d), with deed restriction	10 ppm in concrete remaining	above + 61(a)(7)+(8)
		Double-wash concrete surface, let dry, paint over, apply ML mark	— (e)	61(a)(4)(iii); 30(p)(1)
	Soil	Remove and dispose, with no further constraints	≤ 1ppm in soil remaining	61(a)(4)(i)(A)
		Remove and dispose, cap remaining soil, with deed restriction	≤ 10 ppm in soil remaining	above + 61(a)(7)+(8)
Low occupancy (worker presence <840 hr/yr or <16.8 hr/wk)	Non-porous	Wash and rinse surface, dispose of waste solution	100 µg/100 cm ² on wipe sample	61(a)(4)(ii)
	Concrete (or other porous)	Scarify concrete surface and dispose of waste concrete	1 ppm in concrete remaining	61(a)(4)(iii); 61(a)(4)(i)(A)
		Encapsulate with soil/asphalt/concrete (d), with deed restriction	10 ppm in concrete remaining	above + 61(a)(7)+(8)
		Double-wash concrete surface, let dry, paint over, apply ML mark	— (e)	61(a)(4)(iii); 30(p)(1)
	Soil	Remove and dispose, with no further constraints	≤ 25 ppm in soil remaining	61(a)(4)(i)(B)(1)
		Remove and dispose, fence off, apply ML mark	≤ 50 ppm in soil remaining	61(a)(4)(i)(B)(2)
		Remove and dispose, cap remaining soil (d), with deed restriction	≤ 100 ppm in soil remaining	61(a)(4)(i)(B)(3); 61(a)(7)+(8)

CT Regulation Matrix (RSRs) (Applies Only to Soils)

Nature of Usage / Access (f)	Cleanup Options (g)	Numerical PCB Decon Specification (h)	Citation (RCSA 22a-133k-...)
Residential use per RSRs	Excavate and remove soil	1 ppm in soil remaining	2(b)(1); Appendix A
Industrial/commercial use per RSRs in a non-restricted access area	Cap to make soil inaccessible (i), apply ELUR (j)	10 ppm in soil remaining (k)	2(b)(2)(B); Appendix A; EPOC Review, Mar 2003 (k)
Industrial/commercial use per RSRs in an other restricted access area	Cap to make soil inaccessible (i), apply ELUR (j)	25 ppm in soil remaining	2(b)(3)(A); Appendix A
Industrial/commercial use per RSRs in an outdoor electrical substation	Cap to make soil inaccessible (i), apply ELUR (j)	25 ppm in soil remaining	2(b)(3)(B); Appendix A
	Cap to make soil inaccessible (i), apply ELUR (j), apply ML mark	50 ppm in soil remaining	2(b)(3)(B); Appendix A

- (a) All areas of the English Station site where PCB contamination has been found presently are low occupancy areas (a defined term, meaning that a person is present in the area less than 840 hrs/yr and also present less than 16.8 hrs/wk). Since the Station B Parcel is to be sold (for future industrial use), the federal cleanup specifications for high occupancy areas apply to this portion of the site.
- (b) For the Station B Parcel, concrete surfaces will be scarified down to the 1 ppm level (and confirmed) rather than the other options, whenever practicable, and debris will be removed for appropriate offsite disposal. Soil will be excavated to achieve a 10 ppm level, with a cap and an ELUR. The 10 ppm level is consistent with the PCB direct exposure criteria for industrial/commercial sites under the Connecticut Remediation Standards Regulations (RSRs). The 1 ppm level is consistent with the PCB direct exposure criteria for residential sites under the RSRs. The ELUR will identify (among other types of residual contamination zones) any PCB residual areas requiring a deed restriction under 40 CFR 761.61. An ELUR is the appropriate CT vehicle for deed restrictions (see below); it will be structured and worded to satisfy the federal requirements, including a designation of property usage.

Table 1 (continued)
PCB Cleanup Specifications for Historical Spills at QE English Station

- (c) These are the specifications in the PCB rules at 40 CFR 761.61 for cleanup of historical spills; not the rules for cleanup of fresh spills under the EPA policy at 40 CFR 761.125. "In soil remaining" or "in concrete remaining" means the residual PCB content in those media left onsite unremediated.
- (d) A cap comprised of 10 inches of compacted fill, or 6 inches of concrete, or 6 inches of asphalt constitutes satisfactory encapsulation under the federal PCB rules. (The cap required for compliance with the Connecticut RSRs is somewhat different (see below) but satisfies the federal requirement.)
- (e) There is no numerical cleanup criterion, because the underlying presumption is that the specified double-wash/rinse technique will render the surface suitable for painting and that the paint will adhere well enough to prevent any contact exposure with residual PCBs remaining in the concrete. If the concrete staining is known to have occurred from contact with oil containing less than 50 ppm PCBs, then cleanup and surface sealing of this sort is not required.
- (f) The Connecticut RSRs define just two kinds of uses with respect to direct exposure cleanup criteria: residential use, and commercial/industrial use. The sections of the RSRs that relate to cleanup of PCB-contaminated soils, however, contain provisions that refer (either directly or inferentially) to definitions in the EPA spill cleanup policy at 40 CFR 761.123, as follows:
 - "Residential/commercial area" means areas where people live or reside, including roads and sidewalks to which the public has access. The nearest area to English Station that is actually zoned residential or commercial is northeast of Grand Ave and Haven St; all the areas closer to the Station are zoned IH or IL (heavy industrial or light industrial). However, Grand Avenue itself is a *residential/commercial area* under this definition because it is open to public access; in addition to transient vehicles and pedestrians, there is occasional public fishing off the Grand Avenue bridge.
 - "Outdoor electrical substation" means an outdoor, fenced-off restricted access area used for electrical transmission/distribution, and more than 100 m from a residential/commercial area. All of the capacitor and transformer pads at English Station fit this definition; none are closer than 100 m to a zoned residential/commercial area or to Grand Avenue. These areas are delineated on Figure 1.
 - "Other restricted access location" means areas other than substations that are at least 100 m from a residential/commercial area, and are limited by manmade barriers such as fences and walls, or natural barriers. All of English Station is further than 100 m from the nearest zoned residential/commercial area north of Grand Ave and Haven St. Most of English Station (the area south of the approximate center of the coal yard) is further than 100 m from Grand Avenue. The island is surrounded by water on three sides, with a vertical bulkhead wall, and has security gates at the Grand Avenue access. These areas are delineated on Figure 1.
 - "Nonrestricted access area" means anything not in the above two definitions. At English Station this is the area north of an approximate east-west midline through the coal yard, including Station B and the planned parking area to the south of Station B. These areas are delineated on Figure 1.
- (g) The cleanup options in the Connecticut RSRs only apply to soils, not to cleanup of concrete or non-porous materials, and not to sediments. Sediments exist in catch basins on the Station B Parcel; generally, these will be removed if >1 ppm; but if not easily accessible may be left in place (up to the 10 ppm criterion) and simply sealed off. There is a general provision in the RSRs for a variance to allow other cleanup options. Such a variance may be applied for, and reviewed and approved by DEP on a case-by-case basis, but there is no particular expectation that a variance outside of the above numerical cleanup standards would be applied for in this case.
- (h) These are the standards for remediation specified in the Connecticut RSRs at RCSA 22a-133k. "In soil remaining" means the residual PCB content in the soils left onsite unremediated.
- (i) Rendering the soil "inaccessible" as defined in the RSRs means installing a cap consisting of four feet of soil, or a cap consisting of two feet of soil including a 3-inch concrete or asphalt layer on top. Alternatively, a building can be built over an area to render it inaccessible.
- (j) The environmental land use restriction (ELUR) specified in the RSRs has a prescriptive form and content developed by DEP explicitly for site remediation purposes; in this situation, the appropriate language also will be added to comport with federal requirements.
- (k) The language discrepancy between RCSA 22a-133k-2(b)(2)(B) for PCBs in residential or "non-restricted access" areas, and RCSA 22a-133k-2(b)(2)(A) for contaminants other than PCBs in those same areas was clarified in a DEP workshop presentation to the Environmental Professionals Organization of Connecticut on March 25, 2003, page 13. So long as the soil is rendered "inaccessible" (which includes an environmental land use restriction), the cleanup criterion is 10 ppm.

Table A1.1a

Sampling and Analysis Data: Station B Interior—Overhead Crane

Area 1.1: Station B—Overhead Crane

AOC #:	1
PCB Area Description:	Overhead crane: motor and non-porous steel surface
Location Reference:	Figure A1.1 (Individual sample locations not shown.)
Sample Matrix:	Motor oil; hexane wipe of steel surface
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg); micrograms per 100 square centimeters (µg/100 sq. cm)
Laboratory Results in:	Appendix A

Characterization Samples			Verification Samples			Cleanup Criterion
Sample Point	Sampling Date (Analysis Date)	Sample Result	Sample Point	Sampling Date (Analysis Date)	Sample Result	
MOTOR OIL			MOTOR OIL			MOTOR OIL
NEM ⁽¹⁾	07-18-01 (07-25-01)	6.6 ⁽¹⁾	RS-CS1 ⁽¹⁾	03-21-02 (03-28-02)	ND < 2.0 ⁽¹⁾	2.0
SEM ⁽¹⁾	07-18-01 (07-25-01)	6.6 ⁽¹⁾				2.0
11-16-MISC-113 ⁽²⁾	11-18-99 (11-29-99)	4.0 ⁽²⁾				2.0
HEXANE WIPE OF STEEL SURFACE			HEXANE WIPE OF STEEL SURFACE			HEXANE WIPE
CR-CS01	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS02	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS03	03-21-02 (03-26-02)	ND < 5.0				10.0
CR-CS04	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS05	03-21-02 (03-26-02)	ND < 5.0				10.0
CR-CS06	03-21-02 (03-26-02)	ND < 5.0				10.0
CR-CS07	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS08	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS09	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS10	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS11	03-21-02 (03-26-02)	ND < 5.0				10.0
CR-CS12	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS13	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS14	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS15	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS16	03-21-02 (03-26-02)	ND < 5.0				10.0
CR-CS17	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS18	03-21-02 (04-04-02)	ND < 5.0	CR-CS18B	04-19-02 (04-23-02)	ND < 5.0	10.0
CR-CS19	03-21-02 (03-26-02)	25	CR-CS19B	04-19-02 (04-23-02)	ND < 5.0	10.0
CR-CS20	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS21	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS22	03-21-02 (03-26-02)	ND < 5.0				10.0
CR-CS23	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS24	03-21-02 (03-26-02)	ND < 5.0				10.0
CR-CS25	03-21-02 (03-26-02)	ND < 5.0				10.0
CR-CS26	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS27	03-21-02 (03-26-02)	ND < 5.0				10.0
CR-CS28	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS29	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS30	03-21-02 (03-26-02)	ND < 5.0				10.0

Table A1.1a (continued)
Sampling and Analysis Data: Station B Interior—Overhead Crane

Characterization Samples			Verification Samples			Cleanup Criterion
Sample Point	Sampling Date (Analysis Date)	Sample Result	Sample Point	Sampling Date (Analysis Date)	Sample Result	
HEXANE WIPE OF STEEL SURFACE			HEXANE WIPE OF STEEL SURFACE			HEXANE WIPE
CR-CS31	03-21-02 (03-26-02)	ND < 5.0				10.0
CR-CS32	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS33	03-21-02 (03-26-02)	ND < 5.0				10.0
CR-CS34	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS35	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS36	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS37	03-21-02 (03-26-02)	ND < 5.0				10.0
CR-CS38	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS39	03-21-02 (03-26-02)	ND < 5.0				10.0
CR-CS40	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS41	03-21-02 (03-26-02)	ND < 5.0				10.0
CR-CS42	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS43	03-21-02 (03-26-02)	ND < 5.0				10.0
CR-CS44	03-21-02 (03-26-02)	ND < 5.0				10.0
CR-CS45	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS46	03-21-02 (04-04-02)	ND < 5.0				10.0
CR-CS47	03-21-02 (03-26-02)	ND < 5.0				10.0
Field Blank 1	03-21-02 (03-26-02)	ND < 5.0				NA
Field Blank 2	03-21-02 (04-12-02)	ND < 5.0				NA
Field Blank 3	03-21-02 (04-12-02)	ND < 5.0				NA

Notes for Table A1.1a:

(1) = Sample of oil from a motor on the crane. Result reported as milligrams per kilogram (mg/kg), wet weight.

(2) = Result reported by GEI Consultants, Inc., who did not indicate that the result is reported as wet weight.

NA = Not applicable.

ND = Not detected.

< = Less than minimum detection limit.

Bold indicates that detected concentration exceeds associated cleanup criterion.

Table A1.1b

Sampling and Analysis Data: Station B Interior—Mezzanine and First Floor

Area 1.1: Station B—Mezzanine and first floor

AOC #:	1
PCB Area Description:	Mezzanine and first floor, excluding Annex III
Location Reference:	Figure A1.1 (AEI Sample Points only)
Sample Matrix:	Concrete; wood
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight
Laboratory Results In:	Appendix A

Characterization Samples				Cleanup Criterion
Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result	
FIRST FLOOR: CONCRETE FLOOR				CONCRETE
11-16-MISC-121 ⁽¹⁾	NS	11-19-1999 (12-01-1999)	ND < 1.0	1.0
1CO-01	½ inch	06-16-2004 (06-22-2004)	ND < 0.50	1.0
1CO-02	½ inch	06-16-2004 (06-22-2004)	0.57	1.0
1CO-03	½ inch	06-16-2004 (06-22-2004)	ND < 0.50	1.0
1CO-04	½ inch	06-16-2004 (06-22-2004)	0.98	1.0
1CO-05	½ inch	06-16-2004 (06-22-2004)	ND < 0.50	1.0
1CO-05D	½ inch	06-16-2004 (06-22-2004)	ND < 0.50	1.0
1CO-06	½ inch	06-16-2004 (06-22-2004)	0.52	1.0
1CO-07	½ inch	06-16-2004 (06-22-2004)	ND < 0.50	1.0
1CO-08	½ inch	06-16-2004 (06-22-2004)	ND < 0.50	1.0
1CO-09	½ inch	06-16-2004 (06-22-2004)	ND < 0.50	1.0
1CO-10	½ inch	06-16-2004 (06-22-2004)	ND < 0.50	1.0
1CO-11	½ inch	06-16-2004 (06-22-2004)	ND < 0.50	1.0
FIRST FLOOR: WOOD CHIPS				WOOD
11-16-MISC-123 ⁽¹⁾	NS	11-19-1999 (12-01-1999)	ND < 1.0	1.0
MEZZANINE: WOOD CHIPS				WOOD
11-16-MISC-124 ⁽¹⁾	NS	11-19-1999 (12-01-1999)	ND < 1.0	1.0
11-16-MISC-125 ⁽¹⁾	NS	11-19-1999 (12-01-1999)	ND < 1.0	1.0

Notes for Table A1.1b:

(1) = Result reported by GEI Consultants, Inc., who did not indicate that the results are reported as dry weight.

ND = Not Detected.

NS = Not Specified.

< = Less than minimum detection limit.

Table A1.2

Sampling and Analysis Data: Station B Interior—Annex III Facility

Area 1.2: Station B—Annex III

AOC #:	I
PCB Area Description:	Annex III: porous concrete floor and containment berm
Location Reference:	Figures A1.1, A1.2 (AEI Sample Points only.)
Sample Matrix:	Concrete
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight
Laboratory Results in:	Appendix A

Characterization Samples			1 st and 2 nd Verification Samples ⁽¹⁾			Cleanup Criterion
Sample Point	Sampling Date (Analysis Date)	Sample Result	Sample Point	Sampling Date (Analysis Date)	Sample Result	
ANNEX III CONCRETE FLOOR			ANNEX III CONCRETE FLOOR			CONCRETE
ICO-14	06-16-04 (06-22-04)	ND < 0.50				1.0
A-1	07-18-01 (07-20-01)	ND < 0.50				1.0
A-2	07-18-01 (07-20-01)	ND < 0.50				1.0
A-3	07-18-01 (07-20-01)	ND < 0.50				1.0
A-4	07-18-01 (07-20-01)	ND < 0.50				1.0
B-1	07-18-01 (07-20-01)	17.4	J-1	05-09-02 (05-14-02)	ND < 0.50	1.0
			I-1	05-09-02 (05-14-02)	0.50	1.0
			K-1.5	08-26-02 (08-29-02)	ND < 0.50	1.0
B-2	07-18-01 (07-20-01)	45	J-2	05-09-02 (05-14-02)	ND < 0.50	1.0
			I-2	05-09-02 (05-14-02)	1.6	1.0
			K-2.5	08-26-02 (08-29-02)	1.4	1.0
B-3	07-18-01 (07-20-01)	2.4	J-3	05-09-02 (05-14-02)	ND < 0.50	1.0
			I-3	05-09-02 (05-14-02)	1.1	1.0
			I-3a ⁽²⁾	05-09-02 (05-14-02)	0.65	1.0
			K-3.5	08-26-02 (08-29-02)	ND < 0.50	1.0
			K-3.5 dup	08-26-02 (08-29-02)	ND < 0.50	1.0
B-4	07-18-01 (07-20-01)	ND < 0.50	J-4	05-09-02 (05-14-02)	ND < 0.50	1.0
			I-4	05-09-02 (05-14-02)	ND < 0.50	1.0
ICO-13	06-16-04 (06-22-04)	ND < 0.50				1.0
ICO-15	06-16-04 (06-22-04)	ND < 0.50				1.0
C-1	07-18-01 (07-20-01)	1.3	H-1	05-09-02 (05-14-02)	ND < 0.50	1.0
			L-1.5	08-26-02 (08-29-02)	ND < 0.50	1.0
C-2	07-18-01 (07-20-01)	1.5	H-2	05-09-02 (05-14-02)	ND < 0.50	1.0
			L-2.5	08-26-02 (08-29-02)	ND < 0.50	1.0
C-3	07-18-01 (07-20-01)	0.98	H-3	05-09-02 (05-14-02)	ND < 0.50	1.0
			L-3.5	08-26-02 (08-29-02)	ND < 0.50	1.0
C-4	07-18-01 (07-20-01)	ND < 0.50				1.0
D-1	07-18-01 (07-20-01)	0.94				1.0
D-2	07-18-01 (07-20-01)	0.77				1.0
D-3	07-18-01 (07-20-01)	ND < 0.50				1.0
D-4	07-18-01 (07-20-01)	ND < 0.50				1.0
E-1	07-18-01 (07-20-01)	0.69				1.0
E-2	07-18-01 (07-20-01)	0.98				1.0
E-3	07-18-01 (07-20-01)	0.51				1.0
E-4	07-18-01 (07-20-01)	ND < 1.0 ⁽³⁾				1.0

Table A1.2 (continued)

Sampling and Analysis Data: Station B Interior—Annex III Facility

Characterization Samples			1 st and 2 nd Verification Samples ⁽¹⁾			Cleanup Criterion
Sample Point	Sampling Date (Analysis Date)	Sample Result	Sample Point	Sampling Date (Analysis Date)	Sample Result	
ANNEX III CONCRETE FLOOR			ANNEX III CONCRETE FLOOR			CONCRETE
ICO-16	06-16-04 (06-22-04)	ND < 0.50				1.0
SE-1	07-18-01 (07-20-01)	0.80				1.0
ICO-12	06-16-04 (06-22-04)	ND < 0.50				1.0
F-2	07-18-01 (07-20-01)	ND < 0.50				1.0
F-3	07-18-01 (07-20-01)	ND < 1.0 ⁽³⁾				1.0
F-4	07-18-01 (07-20-01)	ND < 1.0 ⁽³⁾				1.0
SF-1	07-18-01 (07-20-01)	ND < 1.0 ⁽³⁾				1.0
SF-3	07-18-01 (07-20-01)	ND < 1.0 ⁽³⁾				1.0
G-2	07-18-01 (07-20-01)	ND < 1.0 ⁽³⁾				1.0
G-3	07-18-01 (07-20-01)	ND < 1.0 ⁽³⁾				1.0
						1.0
			Field blank	05-09-02 (05-13-02)	ND < 0.50 ⁽⁴⁾	NA
			Equip. Blank	08-26-02 (08-29-02)	ND < 10 ⁽⁴⁾	NA
ICO-EB01	06-16-04 (06-21-04)	ND < 12 ⁽⁴⁾				NA
CS-5 ⁽⁵⁾	06-11-98 (06-23-98)	15				1.0
11-16-MISC- 114 ⁽⁵⁾	11-18-99 (11-29-99)	ND < 1.0				1.0
11-16-MISC- 115 ⁽⁵⁾	11-18-99 (11-29-99)	ND < 1.0				1.0
11-16-MISC- 116 ⁽⁵⁾	11-18-99 (11-29-99)	ND < 1.0				1.0

Notes for Table A1.2:

(1) = Sample locations selected using a 5-foot grid.

(2) = Duplicate sample.

(3) = Minimum detection limit (MDL) affected by matrix interference.

(4) = Water matrix. Units are micrograms per liter (µg/L).

(5) = Result reported by GEI Consultants, Inc., who did not indicate that the results are reported as dry weight.

ND = Not Detected.

< = Less than minimum detection limit.

Bold indicates that detected concentration exceeds associated cleanup criterion.

Depth = ½ inch for all AEI samples. Depth not specified for GEI samples.

Table A1.3

Sampling and Analysis Data: Station B Interior—Basement

Area 1.3: Station B—Basement

AOC #:	1
PCB Area Description:	Basement: concrete pads and former earthen floor
Location Reference:	Figure A1.3 (AEI Sample Points only)
Sample Matrix:	Concrete; soil
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight
Laboratory Results In:	Appendix A

Characterization Samples				Cleanup Criterion
Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result	
CONCRETE				CONCRETE
11-16-MISC-117 ⁽¹⁾	NS	11-18-1999 (11-29-1999)	ND < 1.0	1.0
11-16-MISC-118 ⁽¹⁾	NS	11-18-1999 (11-29-1999)	ND < 1.0	1.0
11-16-MISC-119 ⁽¹⁾	NS	11-18-1999 (11-29-1999)	ND < 1.0	1.0
11-16-MISC-120 ⁽¹⁾	NS	11-18-1999 (11-29-1999)	1.0	1.0
11-16-MISC-122 ⁽¹⁾	NS	11-19-1999 (12-01-1999)	ND < 1.0	1.0
SOIL				SOIL
SS-N	0.0-1.0	05-02-2001 (05-18-2001)	ND < 0.50	10.0
SS-O	0.0-0.5	05-02-2001 (05-04-2001)	ND < 0.50	10.0
SS-P	0.0-0.5	05-02-2001 (05-04-2001)	ND < 0.50	10.0
SS-Q	0.0-0.5	05-02-2001 (05-04-2001)	ND < 0.50	10.0
SS-R	0.0-0.5	05-02-2001 (05-18-2001)	ND < 0.50	10.0
SS-S	0.0-0.5	05-02-2001 (05-04-2001)	ND < 0.50	10.0
SS-T	0.0-0.5	05-02-2001 (05-18-2001)	ND < 0.50	10.0

Notes for Table A1.3:

(1) = Result reported by GEI Consultants, Inc., who did not indicate that the results are reported as dry weight.

ND = Not Detected.

NS = Not Specified.

< = Less than minimum detection limit.

Table A2.1

Sampling and Analysis Data: Station B Yard Areas—Elevated Tracks

Area 2.1: Former Coal Yard

AOC #:	12W
PCB Area Description:	Elevated railroad tracks and foundations
Location Reference:	Figure 6
Sample Matrix:	Soil
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight
Laboratory Results in:	Appendix A

Characterization Samples				Cleanup Criterion
Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result	
SOIL				SOIL
2HA-139	0.0-0.25	11-08-2004 (11-13-2004)	ND < 0.50	10.0
2HA-139	0.25-1.25	11-08-2004 (11-13-2004)	ND < 0.50	10.0
2HA-140	0.0-0.25	11-08-2004 (11-13-2004)	ND < 0.50	10.0
2HA-140	0.25-1.25	11-08-2004 (11-13-2004)	ND < 0.50	10.0
SS-II	0.0-0.3	04-03-2002 (04-06-2002)	ND < 0.50	10.0
SS-JJ	0.0-0.3	04-03-2002 (04-06-2002)	ND < 0.50	10.0
SS-KK ⁽¹⁾	0.0-0.3	04-03-2002 (04-06-2002)	0.83	10.0
SS-LL	0.0-0.3	04-03-2002 (04-06-2002)	ND < 0.50	10.0
SS-MM	0.0-0.3	04-03-2002 (04-06-2002)	ND < 0.50	10.0
SS-NN	0.0-0.3	04-03-2002 (04-06-2002)	ND < 0.50	10.0
SS-OO	0.0-0.3	04-02-2002 (04-11-2002)	ND < 0.50	10.0
SS-X	0.0-0.6	05-14-2001 (05-22-2001)	ND < 0.50	10.0
SS-Y	0.0-0.6	05-14-2001 (05-22-2001)	ND < 0.50	10.0
SS-Z	0.0-0.6	05-14-2001 (05-22-2001)	ND < 0.50	10.0

Notes for Table A2.1:

(1) = Sample also tested for leachable PCBs using the Synthetic Precipitation Leachate Procedure (SPLP). SPLP PCBs were not detected.

ND = Not Detected.

< = Less than minimum detection limit.

Table A2.2

Sampling and Analysis Data: Station B Yard Areas—Former Coal Yard

Area 2.2: Former Coal Yard

AOC #:	12N
PCB Area Description:	Paved and unpaved areas south and west of Station B
Location Reference:	Figure 6
Sample Matrix:	Asphalt; concrete; soil; catch basin sediment
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight
Laboratory Results In:	Appendix A

Characterization Samples				Cleanup Criterion
Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result	
ASPHALT ⁽¹⁾				ASPHALT
2HA-241	0.0-0.3	12-16-2004 (12-28-2004)	ND < 0.50	1.0
2HA-242	0.0-0.3	12-16-2004 (12-28-2004)	ND < 0.50	1.0
2TB-207	0.0-0.3	11-18-2004 (12-03-2004)	ND < 0.50	1.0
TB-CCCC	0.0-0.3	04-03-2002 (04-06-2002)	ND < 0.50	1.0
TB-DDDD	0.0-0.3	04-03-2002 (04-06-2002)	ND < 0.50	1.0
TB-EEEE	0.0-0.3	04-04-2002 (04-08-2002)	ND < 0.50	1.0
TB-JJJJ	0.0-0.3	04-04-2002 (04-08-2002)	ND < 0.50	1.0
TB-KKKK	0.0-0.3	04-04-2002 (04-09-2002)	ND < 0.50	1.0
TB-MMMM	0.0-0.3	04-04-2002 (04-09-2002)	ND < 0.50	1.0
TB-NNNN	0.0-0.3	04-04-2002 (04-09-2002)	ND < 0.50	1.0
TB-OOOO	0.0-0.3	04-05-2002 (04-11-2002)	ND < 0.50	1.0
TB-PPPP	0.0-0.3	04-05-2002 (04-11-2002)	ND < 0.50	1.0
TB-RRRR	0.0-0.3	04-05-2002 (04-11-2002)	ND < 0.50	1.0
TB-SSSS	0.0-0.3	04-05-2002 (04-11-2002)	ND < 0.50	1.0
CONCRETE				CONCRETE
2CO-129	½ inch	11-30-2004 (12-07-2004)	ND < 0.50	1.0
2CO-130	½ inch	11-30-2004 (12-07-2004)	ND < 0.50	1.0
2CO-131	½ inch	11-30-2004 (12-07-2004)	ND < 0.50	1.0
2CO-177	½ inch	12-16-2004 (12-28-2004)	ND < 0.50	1.0
2CO-504	½ inch	11-30-2004 (12-07-2004)	ND < 0.50	1.0
SEDIMENT				SEDIMENT
CB-2	0.0-0.3	05-10-2001 (05-15-2001)	3.8	1.0
CB-3	0.0-0.3	05-10-2001 (05-15-2001)	ND < 0.50	1.0
SOIL				SOIL
2HA-241	0.3-0.6	12-16-2004 (12-28-2004)	ND < 0.50	10.0
2HA-242	0.3-0.5	12-16-2004 (12-28-2004)	ND < 0.50	10.0
2TB-206 ⁽¹⁾	0.0-0.3	11-18-2004 (12-03-2004)	3.0	10.0
2TB-206	0.3-2.3	11-18-2004 (12-03-2004)	ND < 0.50	10.0
2TB-206 ⁽¹⁾	4.3-6.3	11-18-2004 (12-03-2004)	1.44	10.0
2TB-207	0.3-1.3	11-18-2004 (12-03-2004)	ND < 0.50	10.0
2TB-207	1.3-2.3	11-18-2004 (12-03-2004)	ND < 0.50	10.0
2TB-207 ⁽¹⁾	2.3-4.3	11-18-2004 (12-03-2004)	0.55	10.0
2TB-207	4.3-6.3	11-18-2004 (12-03-2004)	ND < 0.50	10.0
MW-07 ⁽²⁾	7-9	06-04-1998 (06-12-1998)	ND < 1.0	10.0
MW-22 ⁽²⁾	7-9	06-09-1998 (06-19-1998)	ND < 1.0	10.0

Table A2.2 (continued)

Sampling and Analysis Data: Station B Yard Areas—Former Coal Yard

Characterization Samples				Cleanup Criterion
Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result	
SOIL				SOIL
SS-CC	0.0-0.3	04-03-2002 (04-08-2002)	ND < 0.50	10.0
SS-CC	0.3-1.3	04-03-2002 (04-08-2002)	ND < 0.50	10.0
SS-DD	0.0-0.3	04-03-2002 (04-08-2002)	ND < 0.50	10.0
SS-DD	0.3-1.3	04-03-2002 (04-18-2002)	ND < 0.50	10.0
SS-EE	0.0-0.3	04-03-2002 (04-08-2002)	ND < 0.50	10.0
SS-EE	0.3-1.3	04-03-2002 (04-08-2002)	ND < 0.50	10.0
TB-09 ⁽¹⁾	3-7	06-04-1998 (06-12-1998)	ND < 1.0	10.0
TB-10 ⁽²⁾	11-13	06-04-1998 (06-12-1998)	ND < 1.0	10.0
TB-C	2-4	05-10-2001 (05-15-2001)	ND < 0.50	10.0
TB-CCCC	2.5-2.8	04-03-2002 (04-06-2002)	ND < 0.50	10.0
TB-CCCC	2.8-3.8	04-03-2002 (04-06-2002)	ND < 0.50	10.0
TB-CCCC	4.5-6.0	04-03-2002 (04-06-2002)	ND < 0.50	10.0
TB-CCCC	10-12	04-03-2002 (04-06-2002)	ND < 0.50	10.0
TB-D	2-4	05-11-2001 (05-18-2001)	ND < 0.50	10.0
TB-DDDD	1.3-1.6	04-03-2002 (04-06-2002)	ND < 0.50	10.0
TB-DDDD	1.6-2.6	04-03-2002 (04-06-2002)	ND < 0.50	10.0
TB-DDDD	3.3-4.3	04-03-2002 (04-06-2002)	ND < 0.50	10.0
TB-DDDD	15-17	04-03-2002 (04-06-2002)	ND < 0.50	10.0
TB-EEEE	1.5-1.8	04-04-2002 (04-08-2002)	ND < 0.50	10.0
TB-EEEE	1.8-2.8	04-04-2002 (04-08-2002)	ND < 0.50	10.0
TB-EEEE	3.8-5.8	04-04-2002 (04-08-2002)	ND < 0.50	10.0
TB-EEEE	10-12	04-04-2002 (04-08-2002)	ND < 0.50	10.0
TB-F	0-2	05-11-2001 (05-18-2001)	ND < 0.50	10.0
TB-JJJJ	1.5-1.8	04-04-2002 (04-08-2002)	ND < 0.50	10.0
TB-JJJJ	1.8-2.8	04-04-2002 (04-08-2002)	ND < 0.50	10.0
TB-JJJJ	3.5-5.0	04-04-2002 (04-08-2002)	ND < 0.50	10.0
TB-JJJJ	5.0-5.5	04-04-2002 (04-08-2002)	ND < 0.50	10.0
TB-KKKK	1.0-1.3	04-04-2002 (04-09-2002)	ND < 0.50	10.0
TB-KKKK	1.3-2.3	04-04-2002 (04-09-2002)	ND < 0.50	10.0
TB-KKKK	5-6	04-04-2002 (04-09-2002)	ND < 0.50	10.0
TB-KKKK	5-6 D	04-02-2002 (04-11-2002)	ND < 0.50	10.0
TB-LLLL	0.0-0.3	04-04-2002 (04-09-2002)	ND < 0.50	10.0
TB-LLLL	0.3-0.6	04-04-2002 (04-09-2002)	ND < 0.50	10.0
TB-LLLL	0.6-1.6	04-04-2002 (04-09-2002)	ND < 0.50	10.0
TB-LLLL	3.3-4.3	04-04-2002 (04-09-2002)	ND < 0.50	10.0
TB-LLLL	4.3-6.3	04-04-2002 (04-09-2002)	ND < 0.50	10.0
TB-MMMM	0.5-0.8	04-04-2002 (04-09-2002)	ND < 0.50	10.0
TB-MMMM	0.8-1.8	04-04-2002 (04-09-2002)	ND < 0.50	10.0
TB-MMMM	4.5-6.5	04-04-2002 (04-09-2002)	ND < 0.50	10.0
TB-NNNN	1.0-1.3	04-04-2002 (04-09-2002)	ND < 0.50	10.0
TB-NNNN	1.3-2.3	04-04-2002 (04-09-2002)	ND < 0.50	10.0
TB-NNNN	4-5	04-04-2002 (04-09-2002)	ND < 0.50	10.0
TB-OOOO	2.0-2.3	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-OOOO	4-5	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-PPPP	0.3-0.6	04-05-2002 (04-11-2002)	ND < 0.50	10.0

Table A2.2 (continued)
Sampling and Analysis Data: Station B Yard Areas—Former Coal Yard

Characterization Samples				Cleanup Criterion
Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result	
SOIL				SOIL
TB-PPPP	0.9–1.0	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-PPPP	2.3–4.3	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-QQQQ	0.0–0.3	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-QQQQ	0.3–2.3	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-QQQQ	2.3–4.3	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-RRRR	1.0–1.3	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-RRRR	3.3–3.9	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-RRRR	3.9–4.0	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-SSSS	2.2–2.5	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-SSSS	2.5–4.5	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-TTTT	0.0–0.3	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-TTTT	1.0–1.3	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-TTTT	2.3–4.3	04-05-2002 (04-11-2002)	ND < 0.50	10.0

Notes for Table A2.2:

- (1) = Asphalt samples may include some base material (e.g., cobbles or gravel).
 - (2) = Result reported by GEI Consultants, Inc.
 - (3) = Sample also tested for leachable PCBs using the Synthetic Precipitation Leachate Procedure (SPLP). SPLP PCBs were ND < 0.50 micrograms per liter (µg/L).
- ND = Not detected. <= Less than minimum detection limit.

Table A6.1

Sampling and Analysis Data: Station B Yard Areas—South And West Adjacent

Area 6.1: Former Coal Yard and Area Adjacent to Station B

AOC #:	2, 3, 12N
PCB Area Description:	Paved and unpaved areas south and west of Station B
Location Reference:	Figure 6
Sample Matrix:	Asphalt; concrete; soil; catch basin sediment; hexane wipe of steel surface
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight; micrograms per 100 square centimeters (µg/100 sq. cm)
Laboratory Results in:	Appendix A

Characterization Samples				Cleanup Criterion
Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result	
ASPHALT ⁽¹⁾				ASPHALT
AOC2-CS6	0.0-0.25	03-12-2002 (03-14-2002)	ND < 0.50	1.0
TB-AAAAA	0.0-0.3	04-05-2002 (04-10-2002)	ND < 0.50	1.0
TB-BBBBB	0.0-0.3	04-05-2002 (04-10-2002)	ND < 0.50	1.0
TB-CCCCC	0.0-0.3	04-05-2002 (04-10-2002)	ND < 0.50	1.0
TB-DDDDD	0.0-0.3	04-05-2002 (04-10-2002)	ND < 0.50	1.0
TB-FFFF	0.0-0.3	04-04-2002 (04-08-2002)	ND < 0.50	1.0
TB-FFFFF	0.0-0.3	04-05-2002 (04-10-2002)	ND < 0.50	1.0
TB-GGGGG	0.0-0.3	04-05-2002 (04-10-2002)	ND < 0.50	1.0
TB-HHHHH	0.0-0.3	04-05-2002 (04-10-2002)	ND < 0.50	1.0
TB-IIIII	0.0-0.3	04-05-2002 (04-10-2002)	ND < 0.50	1.0
TB-JJJJJ	0.0-0.3	04-05-2002 (04-10-2002)	ND < 0.50	1.0
TB-KKKKK	0.0-0.3	04-05-2002 (04-10-2002)	ND < 0.50	1.0
TB-UUUUU	0.0-0.3	04-05-2002 (04-11-2002)	ND < 0.50	1.0
TB-WWWWW	0.0-0.3	04-05-2002 (04-11-2002)	ND < 0.50	1.0
TB-YYYY	0.0-0.3	04-05-2002 (04-11-2002)	ND < 0.50	1.0
6AS-001	½ inch	08-26-2004 (08-30-2004)	ND < 0.50	1.0
6AS-001D	½ inch	08-26-2004 (08-30-2004)	ND < 0.50	1.0
EB-06*	NA	08-26-2004 (08-31-2004)	ND < 12 **	NA
CONCRETE				CONCRETE
6CO-065	½ inch	08-26-2004 (08-30-2004)	ND < 0.50	1.0
SOIL				SOIL
AOC2-CS2	0-2	03-12-2002 (03-14-2002)	ND < 0.50	10.0
AOC2-CS2	2-4	03-12-2002 (03-14-2002)	ND < 0.50	10.0
AOC2-CS2	5-7	03-12-2002 (03-14-2002)	ND < 0.50	10.0
AOC2-CS6	0.25-2.0	03-12-2002 (03-14-2002)	ND < 0.50	10.0
AOC2-CS6	2-4	03-12-2002 (03-14-2002)	ND < 0.50	10.0
AOC2-CS6	5-7	03-12-2002 (03-14-2002)	ND < 0.50	10.0
MW-02 ⁽²⁾	13-17	06-02-1998 (06-10-1998)	ND < 1.0	10.0
MW-03 ⁽²⁾	15-17	06-04-1998 (06-12-1998)	ND < 1.0	10.0
TB-01 ⁽²⁾	7-8	06-02-1998 (06-10-1998)	ND < 1.0	10.0
TB-05 ⁽²⁾	4-6	06-04-1998 (06-12-1998)	ND < 1.0	10.0
TB-06 ⁽²⁾	1-7	06-04-1998 (06-12-1998)	ND < 1.0	10.0
TB-07 ⁽²⁾	5	06-04-1998 (06-12-1998)	ND < 1.0	10.0
TB-07A ⁽²⁾	7-9	06-04-1998 (06-12-1998)	ND < 1.0	10.0
TB-08A ⁽²⁾	1-3	06-04-1998 (06-12-1998)	ND < 1.0	10.0
TB-08B ⁽²⁾	9-11	06-04-1998 (06-12-1998)	ND < 1.0	10.0
TB-08B ⁽²⁾	15-17	06-04-1998 (06-12-1998)	ND < 1.0	10.0

Table A6.1 (continued)

Sampling and Analysis Data: Station B Yard Areas—South And West Adjacent

Characterization Samples				Cleanup Criterion
Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result	
SOIL				SOIL
TB-AAAAA	0.5-2.5	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-BBBBB	0.5-2.5	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-BBBBB	2.5-4.5	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-BBBBB	4.5-5.5	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-CCCCC	2-4	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-CCCCC	4-5	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-DDDDD	0.5-0.8	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-EEEE	0.0-0.3	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-EEEE	0.3-2.3	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-EEEE	2.3-4.3	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-FFFF	0.5-0.8	04-04-2002 (04-08-2002)	ND < 0.50	10.0
TB-FFFF	2.5-3.5	04-04-2002 (04-08-2002)	ND < 0.50	10.0
TB-FFFF	3.5-4.5	04-04-2002 (04-08-2002)	ND < 0.50	10.0
TB-FFFFF	0.5-0.8	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-GGGGG	0.5-1.2	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-HHHHH	0.5-2.5	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-HHHHH	2.5-4.5	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-I	2-4	05-14-2001 (05-18-2001)	ND < 0.50	10.0
TB-J	2-4	05-14-2001 (05-18-2001)	ND < 0.50	10.0
TB-JJJJ	0.3-2.3	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-JJJJ	2.3-4.3	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-KKKKK	1-2	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-KKKKK	4-5	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-L	2-4	05-14-2001 (05-18-2001)	ND < 0.50	10.0
TB-UUUU	1.2-1.5	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-UUUU	5-7	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-VVVV	0.0-0.3	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-VVVV	0.5-2.5	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-VVVV	2.5-4.5	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-WWWW	2.2-2.5	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-WWWW	2.5-4.5	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-XXXX	0.0-0.3	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-XXXX	2.3-4.3	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-XXXX	4.3-6.3	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-YYYY	2.0-2.3	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-YYYY	2.5-3.0	04-05-2002 (04-11-2002)	ND < 0.50	10.0
TB-YYYY	3-5	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-YYYY	5-7	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-ZZZZ	0.0-0.3	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-ZZZZ	0.3-2.3	04-05-2002 (04-10-2002)	ND < 0.50	10.0
TB-ZZZZ	2.3-4.3	04-05-2002 (04-10-2002)	ND < 0.50	10.0

Table A6.1 (continued)

Sampling and Analysis Data: Station B Yard Areas—South And West Adjacent

Characterization Samples				Cleanup Criterion
Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result	
CATCH BASIN SEDIMENT				SEDIMENT
CB-1	0.0-0.8	05-10-2001 (05-15-2001)	ND < 0.50	1.0
HEXANE WIPE OF STEEL SURFACE				HEXANE WIPE
6HX-007	NA	08-26-2004 (09-01-2004)	ND < 10	10.0
6HX-007D	NA	08-26-2004 (09-01-2004)	ND < 10	10.0
Field Blank 2	NA	08-26-2004 (09-01-2004)	ND < 5.0	NA

Notes for Table A6.1:

(1) = Asphalt samples may include some base material (e.g., cobbles or gravel).

(2) = Result reported by GEI Consultants, Inc.

NA = Not applicable. ND = Not detected.

< = Less than minimum detection limit.

* = Equipment Blank, matrix water. ** = Detection limit based on sample size supplied for analysis.

Table A6.2

Sampling and Analysis Data: Station B Yard Areas—Mill River East Branch

Area 6.2: Mill River East Branch Area

AOC #:	12E
PCB Area Description:	Mill River East Branch area
Location Reference:	Figure 6
Sample Matrix:	Soil
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight
Laboratory Results in:	Appendix A

Characterization Samples				Cleanup Criterion
Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result	
SOIL				SOIL
MW-04D ⁽¹⁾	36-40	06-10-1998 (06-18-1998)	ND < 1.0	10.0
MW-05 ⁽¹⁾	2-4	05-26-1998 (06-07-1998)	ND < 1.0	10.0

Notes for Table A6.2:

(1) = Result reported by GEI Consultants, Inc.

ND = Not Detected.

< = Less than minimum detection limit.

Table 1

SUMMARY OF PROCEDURES FOR PCB SAMPLING AND ANALYSIS

Sample Matrix	Sample Type	PCB Area(s)	Procedure^(1, 2)
Concrete	Cores (drilling dust)	1.1, 1.2, 2.2, 6.1	EPA's "Draft Standard Operating Procedure for Sampling Concrete in the Field", December 30, 1997.
Ground Water	Low Flow	2.2, 6.1, 6.2	AEI's Standard Operating Procedure (SOP) "Low Stress/Low Flow Ground Water Sampling", SOP-002.
Motor Oil	Grab	1.1	Oil was collected from motor reservoirs using suction bulbs and placed directly into sample containers. Samples were handled in general accordance with standard methods as shown in AEI SOP-002.
Sediment	Polyethylene scoop	2.2, 6.1	AEI's SOP "Sediment Sampling", SOP-003
Soil (test boring)	Split-spoon sampler	2.2, 6.1, 6.2	AEI's SOP "Soil Sampling with a Split-spoon Sampler", SOP-004.
Soil (surface)	Hand auger	1.3, 2.1	Undisturbed surface samples were collected using a hand auger or dedicated scoop. Samples were handled in general accordance with AEI SOP-003.
Steel (non-porous)	Hexane Wipe	1.1, 6.1	EPA's SOP for "Chip, Wipe, and Sweep Sampling", No. 2011, November 16, 1994.
Wood	Chips	1.1	Wood sampling was done by others; the procedure used is not available.

Notes:

(1) = Sampling was performed in general accordance with the procedures shown herein. The procedures cited above are in Appendix A.

(2) = Samples were laboratory-tested for polychlorinated biphenyls (PCBs) using USEPA Method 8082. The laboratory SOP for this procedure is also in Appendix A.

Table A1.1a

SAMPLING AND ANALYSIS DATA: STATION B INTERIOR – OVERHEAD CRANE

Area 1.1: Station B—Overhead Crane

AOC #:	1
PCB Area Description:	Overhead crane: motor and non-porous steel surface
Location Reference:	Figure A1.1 (Individual sample locations not shown.)
Sample Matrix:	Motor oil; hexane wipe of steel surface
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg); micrograms per 100 square centimeters (µg/100 sq. cm)
Laboratory Results in:	Appendix B

Characterization Samples			Verification Samples		
Sample Point	Sampling Date (Analysis Date)	Sample Result	Sample Point	Sampling Date (Analysis Date)	Sample Result
MOTOR OIL			MOTOR OIL		
NEM ⁽¹⁾	07-18-01 (07-25-01)	6.6 ⁽¹⁾	RS-CS1 ⁽¹⁾	03-21-02 (03-28-02)	ND < 2.0 ⁽¹⁾
SEM ⁽¹⁾	07-18-01 (07-25-01)	6.6 ⁽¹⁾			
11-16-MISC-113 ⁽²⁾	11-18-99 (11-29-99)	4.0 ⁽²⁾			
HEXANE WIPE OF STEEL SURFACE			HEXANE WIPE OF STEEL SURFACE		
CR-CS01	03-21-02 (04-04-02)	ND < 5.0			
CR-CS02	03-21-02 (04-04-02)	ND < 5.0			
CR-CS03	03-21-02 (03-26-02)	ND < 5.0			
CR-CS04	03-21-02 (04-04-02)	ND < 5.0			
CR-CS05	03-21-02 (03-26-02)	ND < 5.0			
CR-CS06	03-21-02 (03-26-02)	ND < 5.0			
CR-CS07	03-21-02 (04-04-02)	ND < 5.0			
CR-CS08	03-21-02 (04-04-02)	ND < 5.0			
CR-CS09	03-21-02 (04-04-02)	ND < 5.0			
CR-CS10	03-21-02 (04-04-02)	ND < 5.0			
CR-CS11	03-21-02 (03-26-02)	ND < 5.0			
CR-CS12	03-21-02 (04-04-02)	ND < 5.0			
CR-CS13	03-21-02 (04-04-02)	ND < 5.0			
CR-CS14	03-21-02 (04-04-02)	ND < 5.0			
CR-CS15	03-21-02 (04-04-02)	ND < 5.0			
CR-CS16	03-21-02 (03-26-02)	ND < 5.0			
CR-CS17	03-21-02 (04-04-02)	ND < 5.0			
CR-CS18	03-21-02 (04-04-02)	ND < 5.0	CR-CS18B	04-19-02 (04-23-02)	ND < 5.0
CR-CS19	03-21-02 (03-26-02)	25	CR-CS19B	04-19-02 (04-23-02)	ND < 5.0
CR-CS20	03-21-02 (04-04-02)	ND < 5.0			
CR-CS21	03-21-02 (04-04-02)	ND < 5.0			
CR-CS22	03-21-02 (03-26-02)	ND < 5.0			
CR-CS23	03-21-02 (04-04-02)	ND < 5.0			
CR-CS24	03-21-02 (03-26-02)	ND < 5.0			
CR-CS25	03-21-02 (03-26-02)	ND < 5.0			
CR-CS26	03-21-02 (04-04-02)	ND < 5.0			
CR-CS27	03-21-02 (03-26-02)	ND < 5.0			
CR-CS28	03-21-02 (04-04-02)	ND < 5.0			
CR-CS29	03-21-02 (04-04-02)	ND < 5.0			

Table A1.1a (cont)

Area 1.1: Station B—Overhead Crane

AOC #:	1
PCB Area Description:	Overhead crane: motor and non-porous steel surface
Location Reference:	Figure A1.1 (Individual sample locations not shown.)
Sample Matrix:	Hexane wipe of steel surface
Analysis:	US EPA Method 8082
Units:	Micrograms per 100 square centimeters (µg/100 sq. cm)
Laboratory Results in:	Appendix B

Characterization Samples			Verification Samples		
Sample Point	Sampling Date (Analysis Date)	Sample Result	Sample Point	Sampling Date (Analysis Date)	Sample Result
HEXANE WIPE OF STEEL SURFACE			HEXANE WIPE OF STEEL SURFACE		
CR-CS30	03-21-02 (03-26-02)	ND < 5.0			
CR-CS31	03-21-02 (03-26-02)	ND < 5.0			
CR-CS32	03-21-02 (04-04-02)	ND < 5.0			
CR-CS33	03-21-02 (03-26-02)	ND < 5.0			
CR-CS34	03-21-02 (04-04-02)	ND < 5.0			
CR-CS35	03-21-02 (04-04-02)	ND < 5.0			
CR-CS36	03-21-02 (04-04-02)	ND < 5.0			
CR-CS37	03-21-02 (03-26-02)	ND < 5.0			
CR-CS38	03-21-02 (04-04-02)	ND < 5.0			
CR-CS39	03-21-02 (03-26-02)	ND < 5.0			
CR-CS40	03-21-02 (04-04-02)	ND < 5.0			
CR-CS41	03-21-02 (03-26-02)	ND < 5.0			
CR-CS42	03-21-02 (04-04-02)	ND < 5.0			
CR-CS43	03-21-02 (03-26-02)	ND < 5.0			
CR-CS44	03-21-02 (03-26-02)	ND < 5.0			
CR-CS45	03-21-02 (04-04-02)	ND < 5.0			
CR-CS46	03-21-02 (04-04-02)	ND < 5.0			
CR-CS47	03-21-02 (03-26-02)	ND < 5.0			
Field Blank 1	03-21-02 (03-26-02)	ND < 5.0			
Field Blank 2	03-21-02 (04-12-02)	ND < 5.0			
Field Blank 3	03-21-02 (04-12-02)	ND < 5.0			

Notes for Table A1.1a:

(1) = Sample of oil from a motor on the crane. Result reported as milligrams per kilogram (mg/kg), wet weight.

(2) = Result reported by GEI Consultants, Inc., who did not indicate that the result is reported as wet weight.

NA = Not applicable.

ND = Not detected.

< = Less than minimum detection limit.

Bold indicates that detected concentration exceeds associated cleanup criterion.

Table A1.1b

SAMPLING AND ANALYSIS DATA: STATION B INTERIOR – MEZZANINE AND FIRST FLOOR**Area 1.1: Station B—Mezzanine and first floor**

AOC #:	1
PCB Area Description:	Mezzanine and first floor, excluding Annex III
Location Reference:	Figure A1.1 (AEI Sample Points only)
Sample Matrix:	Concrete; wood
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight
Laboratory Results In:	Appendix B

Characterization Samples			
Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result
FIRST FLOOR: CONCRETE FLOOR			
11-16-MISC-121 ⁽¹⁾	NS	11-19-1999 (12-01-1999)	ND < 1.0
1CO-01	½ inch	06-16-2004 (06-22-2004)	ND < 0.50
1CO-02	½ inch	06-16-2004 (06-22-2004)	0.57
1CO-03	½ inch	06-16-2004 (06-22-2004)	ND < 0.50
1CO-04	½ inch	06-16-2004 (06-22-2004)	0.98
1CO-05	½ inch	06-16-2004 (06-22-2004)	ND < 0.50
1CO-05D	½ inch	06-16-2004 (06-22-2004)	ND < 0.50
1CO-06	½ inch	06-16-2004 (06-22-2004)	0.52
1CO-07	½ inch	06-16-2004 (06-22-2004)	ND < 0.50
1CO-08	½ inch	06-16-2004 (06-22-2004)	ND < 0.50
1CO-09	½ inch	06-16-2004 (06-22-2004)	ND < 0.50
1CO-10	½ inch	06-16-2004 (06-22-2004)	ND < 0.50
1CO-11	½ inch	06-16-2004 (06-22-2004)	ND < 0.50
FIRST FLOOR: WOOD CHIPS			
11-16-MISC-123 ⁽¹⁾	NS	11-19-1999 (12-01-1999)	ND < 1.0
MEZZANINE: WOOD CHIPS			
11-16-MISC-124 ⁽¹⁾	NS	11-19-1999 (12-01-1999)	ND < 1.0
11-16-MISC-125 ⁽¹⁾	NS	11-19-1999 (12-01-1999)	ND < 1.0

Notes for Table A1.1b:

(1) = Result reported by GEI Consultants, Inc., who did not indicate that the results are reported as dry weight.

ND = Not Detected.

NS = Not Specified.

< = Less than minimum detection limit.

Table A1.2

SAMPLING AND ANALYSIS DATA: STATION B INTERIOR – ANNEX III FACILITY

Area 1.2: Station B—Annex III

AOC #:	1
PCB Area Description:	Annex III: porous concrete floor and containment berm
Location Reference:	Figures A1.1, A1.2 (AEI Sample Points only.)
Sample Matrix:	Concrete
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight
Laboratory Results In:	Appendix B

Characterization Samples			1 st and 2 nd Verification Samples ⁽¹⁾		
Sample Point	Sampling Date (Analysis Date)	Sample Result	Sample Point	Sampling Date (Analysis Date)	Sample Result
ANNEX III CONCRETE FLOOR			ANNEX III CONCRETE FLOOR		
1CO-14	06-16-04 (06-22-04)	ND < 0.50			
A-1	07-18-01 (07-20-01)	ND < 0.50			
A-2	07-18-01 (07-20-01)	ND < 0.50			
A-3	07-18-01 (07-20-01)	ND < 0.50			
A-4	07-18-01 (07-20-01)	ND < 0.50			
B-1	07-18-01 (07-20-01)	17.4	J-1	05-09-02 (05-13-02)	ND < 0.50
			I-1	05-09-02 (05-13-02)	0.50
			K-1.5	08-26-02 (08-29-02)	ND < 0.50
B-2	07-18-01 (07-20-01)	45	J-2	05-09-02 (05-13-02)	ND < 0.50
			I-2	05-09-02 (05-13-02)	1.6
			K-2.5	08-26-02 (08-29-02)	1.4
B-3	07-18-01 (07-20-01)	2.4	J-3	05-09-02 (05-13-02)	ND < 0.50
			I-3	05-09-02 (05-13-02)	1.1
			I-3a ⁽²⁾	05-09-02 (05-13-02)	0.65
			K-3.5	08-26-02 (08-29-02)	ND < 0.50
			K-3.5 dup	08-26-02 (08-29-02)	ND < 0.50
B-4	07-18-01 (07-20-01)	ND < 0.50	J-4	05-09-02 (05-13-02)	ND < 0.50
			I-4	05-09-02 (05-13-02)	ND < 0.50
1CO-13	06-16-04 (06-22-04)	ND < 0.50			
1CO-15	06-16-04 (06-22-04)	ND < 0.50			
C-1	07-18-01 (07-20-01)	1.3	H-1	05-09-02 (05-13-02)	ND < 0.50
			L-1.5	08-26-02 (08-29-02)	ND < 0.50
C-2	07-18-01 (07-20-01)	1.5	H-2	05-09-02 (05-13-02)	ND < 0.50
			L-2.5	08-26-02 (08-29-02)	ND < 0.50
C-3	07-18-01 (07-20-01)	0.98	H-3	05-09-02 (05-13-02)	ND < 0.50
			L-3.5	08-26-02 (08-29-02)	ND < 0.50
C-4	07-18-01 (07-20-01)	ND < 0.50			
D-1	07-18-01 (07-20-01)	0.94			
D-2	07-18-01 (07-20-01)	0.77			
D-3	07-18-01 (07-20-01)	ND < 0.50			
D-4	07-18-01 (07-20-01)	ND < 0.50			
E-1	07-18-01 (07-20-01)	0.69			
E-2	07-18-01 (07-20-01)	0.98			
E-3	07-18-01 (07-20-01)	0.51			

Table A1.2 (cont)

Area 1.2: Station B—Annex III

AOC #:	1
PCB Area Description:	Annex III: porous concrete floor and containment berm
Location Reference:	Figures A1.1, A1.2 (AEI Sample Points only)
Sample Matrix:	Concrete
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight
Laboratory Results In:	Appendix B

Characterization Samples			1 st and 2 nd Verification Samples ⁽¹⁾		
Sample Point	Sampling Date (Analysis Date)	Sample Result	Sample Point	Sampling Date (Analysis Date)	Sample Result
ANNEX III CONCRETE FLOOR			ANNEX III CONCRETE FLOOR		
E-4	07-18-01 (07-20-01)	ND < 1.0 ⁽²⁾			
1CO-16	06-16-04 (06-22-04)	ND < 0.50			
SE-1	07-18-01 (07-20-01)	0.80			
1CO-12	06-16-04 (06-22-04)	ND < 0.50			
F-2	07-18-01 (07-20-01)	ND < 0.50			
F-3	07-18-01 (07-20-01)	ND < 1.0 ⁽³⁾			
F-4	07-18-01 (07-20-01)	ND < 1.0 ⁽³⁾			
SF-1	07-18-01 (07-20-01)	ND < 1.0 ⁽³⁾			
SF-3	07-18-01 (07-20-01)	ND < 1.0 ⁽³⁾			
G-2	07-18-01 (07-20-01)	ND < 1.0 ⁽³⁾			
G-3	07-18-01 (07-20-01)	ND < 1.0 ⁽³⁾			
1CO-EB01	06-16-04 (06-21-04)	ND < 12 ⁽⁴⁾	Field blank	05-09-02 (05-13-02)	ND < 0.50 ⁽⁴⁾
CS-5 ⁽⁵⁾	06-11-98 (06-23-98)	15	Equip. Blank	08-26-02 (08-29-02)	ND < 10 ⁽⁴⁾
11-16-MISC-114 ⁽⁵⁾	11-18-99 (11-29-99)	ND < 1.0			
11-16-MISC-115 ⁽⁵⁾	11-18-99 (11-29-99)	ND < 1.0			
11-16-MISC-116 ⁽⁵⁾	11-18-99 (11-29-99)	ND < 1.0			

Notes for Table A1.2:

(1) = Sample locations selected using a 5-foot grid.

(2) = Duplicate sample.

(3) = Minimum detection limit (MDL) affected by matrix interference.

(4) = Water matrix. Units are micrograms per liter (µg/L).

(5) = Result reported by GEI Consultants, Inc., who did not indicate that the results are reported as dry weight.

ND = Not Detected.

< = Less than minimum detection limit.

Bold indicates that detected concentration exceeds associated cleanup criterion.

Depth = ½ inch for all AEI samples. Depth not specified for GEI samples.

Table A1.3

SAMPLING AND ANALYSIS DATA: STATION B INTERIOR – BASEMENT

Area 1.3: Station B—Basement

AOC #:	1
PCB Area Description:	Basement: concrete pads and former earthen floor
Location Reference:	Figure A1.3 (AEI Sample Points only)
Sample Matrix:	Concrete; soil
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight
Laboratory Results In:	Appendix B

Characterization Samples

Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result
CONCRETE			
11-16-MISC-117 ⁽¹⁾	NS	11-18-1999 (11-29-1999)	ND < 1.0
11-16-MISC-118 ⁽¹⁾	NS	11-18-1999 (11-29-1999)	ND < 1.0
11-16-MISC-119 ⁽¹⁾	NS	11-18-1999 (11-29-1999)	ND < 1.0
11-16-MISC-120 ⁽¹⁾	NS	11-18-1999 (11-29-1999)	1.0
11-16-MISC-122 ⁽¹⁾	NS	11-19-1999 (12-01-1999)	ND < 1.0
SOIL			
SS-N	0.0–1.0	05-02-2001 (05-18-2001)	ND < 0.50
SS-O	0.0–0.5	05-02-2001 (05-04-2001)	ND < 0.50
SS-P	0.0–0.5	05-02-2001 (05-04-2001)	ND < 0.50
SS-Q	0.0–0.5	05-02-2001 (05-04-2001)	ND < 0.50
SS-R	0.0–0.5	05-02-2001 (05-18-2001)	ND < 0.50
SS-S	0.0–0.5	05-02-2001 (05-04-2001)	ND < 0.50
SS-T	0.0–0.5	05-02-2001 (05-18-2001)	ND < 0.50

Notes for Table A1.3:

(1) = Result reported by GEI Consultants, Inc., who did not indicate that the results are reported as dry weight.

ND = Not Detected.

NS = Not Specified.

< = Less than minimum detection limit.

Table A2.1

SAMPLING AND ANALYSIS DATA: STATION B YARD AREAS – ELEVATED TRACKS

Area 2.1: Former Coal Yard

AOC #:	12W
PCB Area Description:	Elevated railroad tracks and foundations
Location Reference:	Figure
Sample Matrix:	Soil
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight
Laboratory Results In:	Appendix B

Characterization Samples			
Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result
SOIL			
2HA-139	0.0–0.25	11-08-2004 (11-13-2004)	ND < 0.50
2HA-139	0.25–1.25	11-08-2004 (11-13-2004)	ND < 0.50
2HA-140	0.0–0.25	11-08-2004 (11-13-2004)	ND < 0.50
2HA-140	0.25–1.25	11-08-2004 (11-13-2004)	ND < 0.50
SS-II	0.0–0.3	04-03-2002 (04-06-2002)	ND < 0.50
SS-JJ	0.0–0.3	04-03-2002 (04-06-2002)	ND < 0.50
SS-KK ⁽¹⁾	0.0–0.3	04-03-2002 (04-06-2002)	0.83
SS-LL	0.0–0.3	04-03-2002 (04-06-2002)	ND < 0.50
SS-MM	0.0–0.3	04-03-2002 (04-06-2002)	ND < 0.50
SS-NN	0.0–0.3	04-03-2002 (04-06-2002)	ND < 0.50
SS-OO	0.0–0.3	04-02-2002 (04-11-2002)	ND < 0.50
SS-X	0.0–0.6	05-14-2001 (05-22-2001)	ND < 0.50
SS-Y	0.0–0.6	05-14-2001 (05-22-2001)	ND < 0.50
SS-Z	0.0–0.6	05-14-2001 (05-22-2001)	ND < 0.50

Notes for Table A2.1:

(1) = Sample also tested for leachable PCBs using the Synthetic Precipitation Leachate Procedure (SPLP). SPLP PCBs were not detected.

ND = Not Detected.

< = Less than minimum detection limit.

Table A2.2

SAMPLING AND ANALYSIS DATA: STATION B YARD AREAS – FORMER COAL YARD**Area 2.2: Former Coal Yard**

AOC #:	12N
PCB Area Description:	Paved and unpaved areas south and west of Station B
Location Reference:	Figure A
Sample Matrix:	Asphalt; concrete; soil; catch basin sediment; water
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight; µg per liter (µg/L)
Laboratory Results In:	Appendix B

Characterization Samples

Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result
ASPHALT ⁽¹⁾			
2HA-241	0.0–0.3	12-16-2004 (12-28-2004)	ND < 0.50
2HA-242	0.0–0.3	12-16-2004 (12-28-2004)	ND < 0.50
2TB-207	0.0–0.3	11-18-2004 (12-03-2004)	ND < 0.50
2TB-256	0.0–0.25	02-23-2006 (02-28-2006)	ND < 0.60
2TB-257	0.0–0.25	02-23-2006 (02-28-2006)	ND < 0.60
2TB-258	0.0–0.25	02-23-2006 (02-28-2006)	ND < 0.60
2TB-259	0.0–0.25	02-23-2006 (02-28-2006)	ND < 0.60
2TB-260	0.0–0.25	02-23-2006 (02-28-2006)	ND < 0.30
2TB-261	0.0–0.25	02-23-2006 (02-28-2006)	ND < 0.30
2TB-262	0.0–0.25	02-23-2006 (02-28-2006)	0.49
2TB-263	0.0–0.25	02-23-2006 (02-28-2006)	0.45
2TB-264	0.0–0.25	02-23-2006 (02-28-2006)	ND < 0.60
2TB-265	0.0–0.25	02-23-2006 (02-28-2006)	ND < 0.60
TB-CCCC	0.0–0.3	04-03-2002 (04-06-2002)	ND < 0.50
TB-DDDD	0.0–0.3	04-03-2002 (04-06-2002)	ND < 0.50
TB-EEEE	0.0–0.3	04-04-2002 (04-08-2002)	ND < 0.50
TB-JJJJ	0.0–0.3	04-04-2002 (04-08-2002)	ND < 0.50
TB-KKKK	0.0–0.3	04-04-2002 (04-09-2002)	ND < 0.50
TB-MMMM	0.0–0.3	04-04-2002 (04-09-2002)	ND < 0.50
TB-NNNN	0.0–0.3	04-04-2002 (04-09-2002)	ND < 0.50
TB-OOOO	0.0–0.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-PPPP	0.0–0.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-RRRR	0.0–0.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-SSSS	0.0–0.3	04-05-2002 (04-11-2002)	ND < 0.50
CONCRETE			
2CO-129	½ inch	11-30-2004 (12-07-2004)	ND < 0.50
2CO-130	½ inch	11-30-2004 (12-07-2004)	ND < 0.50
2CO-131	½ inch	11-30-2004 (12-07-2004)	ND < 0.50
2CO-177	½ inch	12-16-2004 (12-28-2004)	ND < 0.50
2CO-504	½ inch	11-30-2004 (12-07-2004)	ND < 0.50
SEDIMENT			
CB-2	0.0–0.3	05-10-2001 (05-15-2001)	3.8
CB-3	0.0–0.3	05-10-2001 (05-15-2001)	ND < 0.50

Table A2.2 (cont)

Area 2.2: Former Coal Yard

AOC #:	12N
PCB Area Description:	Paved and unpaved areas south and west of Station B
Location Reference:	Figure A
Sample Matrix:	Asphalt; concrete; soil; catch basin sediment; water
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight; µg per liter (µg/L)
Laboratory Results In:	Appendix B

Characterization Samples

Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result
SOIL			
2HA-241	0.3-0.6	12-16-2004 (12-28-2004)	ND < 0.50
2HA-242	0.3-0.5	12-16-2004 (12-28-2004)	ND < 0.50
2TB-206 ⁽¹⁾	0.0-0.3	11-18-2004 (12-03-2004)	3.0
2TB-206	0.3-2.3	11-18-2004 (12-03-2004)	ND < 0.50
2TB-206 ⁽¹⁾	4.3-6.3	11-18-2004 (12-03-2004)	1.44
2TB-207	0.3-1.3	11-18-2004 (12-03-2004)	ND < 0.50
2TB-207	1.3-2.3	11-18-2004 (12-03-2004)	ND < 0.50
2TB-207 ⁽¹⁾	2.3-4.3	11-18-2004 (12-03-2004)	0.55
2TB-207	4.3-6.3	11-18-2004 (12-03-2004)	ND < 0.50
2TB-256	0.25-0.50	02-23-2006 (02-28-2006)	ND < 0.60
2TB-256	0.50-1.00	02-23-2006 (02-28-2006)	ND < 0.30
2TB-256	1.00-2.25	02-23-2006 (02-28-2006)	ND < 0.30
2TB-256	2.25-3.25	02-23-2006 (02-28-2006)	ND < 0.40
2TB-256	3.25-4.25	02-23-2006 (02-28-2006)	ND < 0.40
2TB-256	6.25-8.25	02-23-2006 (02-28-2006)	ND < 0.40
2TB-257	0.5-1.5	02-23-2006 (02-28-2006)	ND < 0.30
2TB-257	1.5-2.5	02-23-2006 (02-28-2006)	ND < 0.60
2TB-257	2.5-4.5	02-23-2006 (02-28-2006)	ND < 0.30
2TB-257	4.5-6.5	02-23-2006 (02-28-2006)	ND < 0.40
2TB-257D	2.5-4.5	02-23-2006 (02-28-2006)	ND < 0.40
2TB-258	0.5-2.5	02-23-2006 (02-28-2006)	ND < 0.30
2TB-258	2.5-4.5	02-23-2006 (02-28-2006)	ND < 0.40
2TB-258	4.5-6.5	02-23-2006 (02-28-2006)	ND < 0.40
2TB-259	0.5-1.5	02-23-2006 (02-28-2006)	ND < 0.30
2TB-259	1.5-2.5	02-23-2006 (02-28-2006)	ND < 0.30
2TB-259	2.5-4.5	02-23-2006 (02-28-2006)	ND < 0.40
2TB-259	4.5-6.5	02-23-2006 (02-28-2006)	ND < 0.40
2TB-260	0.5-1.5	02-23-2006 (02-28-2006)	ND < 0.30
2TB-260	1.5-2.5	02-23-2006 (02-28-2006)	0.30
2TB-260	2.5-4.5	02-23-2006 (02-28-2006)	ND < 0.40
2TB-260	4.5-6.5	02-23-2006 (02-28-2006)	ND < 0.70
2TB-261	0.5-1.0	02-23-2006 (02-28-2006)	ND < 0.30
2TB-261	1.5-3.5	02-23-2006 (02-28-2006)	ND < 0.30
2TB-261	3.5-5.5	02-23-2006 (02-28-2006)	ND < 0.40
2TB-262	0.5-1.0	02-23-2006 (02-28-2006)	ND < 0.30
2TB-262	1.0-2.5	02-23-2006 (02-28-2006)	0.41
2TB-262	2.5-3.5	02-23-2006 (02-28-2006)	ND < 0.30
2TB-262	3.5-4.5	02-23-2006 (02-28-2006)	ND < 1.0

Table A2.2 (cont)

Area 2.2: Former Coal Yard

AOC #:	12N
PCB Area Description:	Paved and unpaved areas south and west of Station B
Location Reference:	Figure A
Sample Matrix:	Asphalt; concrete; soil; catch basin sediment; water
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight; µg per liter (µg/L)
Laboratory Results In:	Appendix B

Characterization Samples

Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result
SOIL			
2TB-262D	1.0-2.5	02-23-2006 (02-28-2006)	0.44
2TB-263	0.5-1.5	02-23-2006 (02-28-2006)	ND < 0.30
2TB-263	1.5-2.5	02-23-2006 (02-28-2006)	ND < 0.30
2TB-263	2.5-4.5	02-23-2006 (02-28-2006)	ND < 0.40
2TB-263	4.5-6.5	02-23-2006 (02-28-2006)	ND < 0.50
2TB-264	0.5-1.5	02-23-2006 (02-28-2006)	ND < 0.30
2TB-264	1.5-2.5	02-23-2006 (02-28-2006)	ND < 0.60
2TB-264	2.5-4.0	02-23-2006 (02-28-2006)	ND < 0.30
2TB-264	4.0-4.5	02-23-2006 (02-28-2006)	ND < 0.40
2TB-264	4.5-6.5	02-23-2006 (02-28-2006)	ND < 0.40
2TB-265	0.5-2.5	02-23-2006 (02-28-2006)	ND < 0.30
2TB-265	1.5-4.0	02-23-2006 (02-28-2006)	ND < 0.60
2TB-265	4.5-6.5	02-23-2006 (02-28-2006)	ND < 0.50
MW-07 ⁽²⁾	7-9	06-04-1998 (06-12-1998)	ND < 1.0
MW-22 ⁽²⁾	7-9	06-09-1998 (06-19-1998)	ND < 1.0
SS-CC	0.0-0.3	04-03-2002 (04-08-2002)	ND < 0.50
SS-CC	0.3-1.3	04-03-2002 (04-08-2002)	ND < 0.50
SS-DD	0.0-0.3	04-03-2002 (04-08-2002)	ND < 0.50
SS-DD	0.3-1.3	04-03-2002 (04-18-2002)	ND < 0.50
SS-EE	0.0-0.3	04-03-2002 (04-08-2002)	ND < 0.50
SS-EE	0.3-1.3	04-03-2002 (04-08-2002)	ND < 0.50
TB-09 ⁽²⁾	3-7	06-04-1998 (06-12-1998)	ND < 1.0
TB-10 ⁽²⁾	11-13	06-04-1998 (06-12-1998)	ND < 1.0
TB-C	2-4	05-10-2001 (05-15-2001)	ND < 0.50
TB-CCCC	2.5-2.8	04-03-2002 (04-06-2002)	ND < 0.50
TB-CCCC	2.8-3.8	04-03-2002 (04-06-2002)	ND < 0.50
TB-CCCC	4.5-6.0	04-03-2002 (04-06-2002)	ND < 0.50
TB-CCCC	10-12	04-03-2002 (04-06-2002)	ND < 0.50
TB-D	2-4	05-11-2001 (05-18-2001)	ND < 0.50
TB-DDDD	1.3-1.6	04-03-2002 (04-06-2002)	ND < 0.50
TB-DDDD	1.6-2.6	04-03-2002 (04-06-2002)	ND < 0.50
TB-DDDD	3.3-4.3	04-03-2002 (04-06-2002)	ND < 0.50
TB-DDDD	15-17	04-03-2002 (04-06-2002)	ND < 0.50
TB-EEEE	1.5-1.8	04-04-2002 (04-08-2002)	ND < 0.50
TB-EEEE	1.8-2.8	04-04-2002 (04-08-2002)	ND < 0.50
TB-EEEE	3.8-5.8	04-04-2002 (04-08-2002)	ND < 0.50
TB-EEEE	10-12	04-04-2002 (04-08-2002)	ND < 0.50
TB-F	0-2	05-11-2001 (05-18-2001)	ND < 0.50

Table A2.2 (cont)

Area 2.2: Former Coal Yard

AOC #:	12N
PCB Area Description:	Paved and unpaved areas south and west of Station B
Location Reference:	Figure A
Sample Matrix:	Asphalt; concrete; soil; catch basin sediment; water
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight; µg per liter (µg/L)
Laboratory Results In:	Appendix B

Characterization Samples			
Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result
SOIL			
TB-JJJJ	1.5-1.8	04-04-2002 (04-08-2002)	ND < 0.50
TB-JJJJ	1.8-2.8	04-04-2002 (04-08-2002)	ND < 0.50
TB-JJJJ	3.5-5.0	04-04-2002 (04-08-2002)	ND < 0.50
TB-JJJJ	5.0-5.5	04-04-2002 (04-08-2002)	ND < 0.50
TB-KKKK	1.0-1.3	04-04-2002 (04-09-2002)	ND < 0.50
TB-KKKK	1.3-2.3	04-04-2002 (04-09-2002)	ND < 0.50
TB-KKKK	5-6	04-04-2002 (04-09-2002)	ND < 0.50
TB-KKKK	5-6 D	04-02-2002 (04-11-2002)	ND < 0.50
TB-LLLL	0.0-0.3	04-04-2002 (04-09-2002)	ND < 0.50
TB-LLLL	0.3-0.6	04-04-2002 (04-09-2002)	ND < 0.50
TB-LLLL	0.6-1.6	04-04-2002 (04-09-2002)	ND < 0.50
TB-LLLL	3.3-4.3	04-04-2002 (04-09-2002)	ND < 0.50
TB-LLLL	4.3-6.3	04-04-2002 (04-09-2002)	ND < 0.50
TB-MMMM	0.5-0.8	04-04-2002 (04-09-2002)	ND < 0.50
TB-MMMM	0.8-1.8	04-04-2002 (04-09-2002)	ND < 0.50
TB-MMMM	4.5-6.5	04-04-2002 (04-09-2002)	ND < 0.50
TB-NNNN	1.0-1.3	04-04-2002 (04-09-2002)	ND < 0.50
TB-NNNN	1.3-2.3	04-04-2002 (04-09-2002)	ND < 0.50
TB-NNNN	4-5	04-04-2002 (04-09-2002)	ND < 0.50
TB-OOOO	2.0-2.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-OOOO	4-5	04-05-2002 (04-11-2002)	ND < 0.50
TB-PPPP	0.3-0.6	04-05-2002 (04-11-2002)	ND < 0.50
TB-PPPP	0.9-1.0	04-05-2002 (04-11-2002)	ND < 0.50
TB-PPPP	2.3-4.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-QQQQ	0.0-0.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-QQQQ	0.3-2.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-QQQQ	2.3-4.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-RRRR	1.0-1.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-RRRR	3.3-3.9	04-05-2002 (04-11-2002)	ND < 0.50
TB-RRRR	3.9-4.0	04-05-2002 (04-11-2002)	ND < 0.50
TB-SSSS	2.2-2.5	04-05-2002 (04-11-2002)	ND < 0.50
TB-SSSS	2.5-4.5	04-05-2002 (04-11-2002)	ND < 0.50
TB-TTTT	0.0-0.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-TTTT	1.0-1.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-TTTT	2.3-4.3	04-05-2002 (04-11-2002)	ND < 0.50

Area 2.2: Former Coal Yard

AOC #:	12N
PCB Area Description:	Paved and unpaved areas south and west of Station B
Location Reference:	Figure A
Sample Matrix:	Asphalt; concrete; soil; catch basin sediment; water
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight; µg per liter (µg/L)
Laboratory Results In:	Appendix B

Characterization Samples			
Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result
WATER ⁽⁴⁾			
2TB-257 EB	2.5-4.5	02-23-2006 (03-1-2006)	ND < 0.50
2TB-262 EB	1.0-2.5	02-23-2006 (03-1-2006)	ND < 0.50

Notes for Table A2.2:

(1) = Asphalt samples may include some base material (e.g., cobbles or gravel).

(2) = Result reported by GEI Consultants, Inc.

(3) = Sample also tested for leachable PCBs using the Synthetic Precipitation Leachate Procedure (SPLP). SPLP PCBs were ND < 0.50.

(4) = Units are µg/L.

ND = Not detected. < = Less than minimum detection limit.

Table A6.1

SAMPLING AND ANALYSIS DATA: STATION B YARD AREAS – SOUTH AND WEST

Area 6.1: Former Coal Yard and Area Adjacent to Station B

AOC #:	2, 3, 12N
PCB Area Description:	Paved and unpaved areas south and west of Station B
Location Reference:	Figure
Sample Matrix:	Asphalt; concrete; soil; catch basin sediment; hexane wipe of steel surface
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight; micrograms per 100 square centimeters (µg/100 sq. cm)
Laboratory Results In:	Appendix B

Characterization Samples

Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result
ASPHALT ⁽¹⁾			
AOC2-CS6	0.0–0.25	03-12-2002 (03-14-2002)	ND < 0.50
TB-AAAAA	0.0–0.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-BBBBB	0.0–0.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-CCCCC	0.0–0.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-DDDDD	0.0–0.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-FFFF	0.0–0.3	04-04-2002 (04-08-2002)	ND < 0.50
TB-FFFFF	0.0–0.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-GGGGG	0.0–0.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-HHHHH	0.0–0.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-IIIII	0.0–0.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-JJJJJ	0.0–0.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-KKKKK	0.0–0.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-UUUUU	0.0–0.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-VVVVV	0.0–0.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-YYYY	0.0–0.3	04-05-2002 (04-11-2002)	ND < 0.50
6AS-001	½ Inch	08-26-2004 (08-30-2004)	ND < 0.50
6AS-001D	½ Inch	08-26-2004 (08-30-2004)	ND < 0.50
EB-06*	NA	08-26-2004 (08-31-2004)	ND < 12 **
CONCRETE			
6CO-065	½ Inch	08-26-2004 (08-30-2004)	ND < 0.50
SOIL			
AOC2-CS2	0–2	03-12-2002 (03-14-2002)	ND < 0.50
AOC2-CS2	2–4	03-12-2002 (03-14-2002)	ND < 0.50
AOC2-CS2	5–7	03-12-2002 (03-14-2002)	ND < 0.50
AOC2-CS6	0.25–2.0	03-12-2002 (03-14-2002)	ND < 0.50
AOC2-CS6	2–4	03-12-2002 (03-14-2002)	ND < 0.50
AOC2-CS6	5–7	03-12-2002 (03-14-2002)	ND < 0.50
MW-02 ⁽²⁾	13–17	06-02-1998 (06-10-1998)	ND < 1.0
MW-03 ⁽²⁾	15–17	06-04-1998 (06-12-1998)	ND < 1.0
TB-01 ⁽²⁾	7–8	06-02-1998 (06-10-1998)	ND < 1.0
TB-05 ⁽²⁾	4–6	06-04-1998 (06-12-1998)	ND < 1.0
TB-06 ⁽²⁾	1–7	06-04-1998 (06-12-1998)	ND < 1.0
TB-07 ⁽²⁾	5	06-04-1998 (06-12-1998)	ND < 1.0
TB-07A ⁽²⁾	7–9	06-04-1998 (06-12-1998)	ND < 1.0

Table A6.1 (cont)

Area 6.1: Former Coal Yard and Area Adjacent to Station B

AOC #:	2, 3, 12N
PCB Area Description:	Paved and unpaved areas south and west of Station B
Location Reference:	Figure
Sample Matrix:	Asphalt; concrete; soil; catch basin sediment; hexane wipe of steel surface
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight; micrograms per 100 square centimeters (µg/100 sq. cm)
Laboratory Results In:	Appendix B

Characterization Samples

Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result
SOIL ¹			
TB-08A ⁽²⁾	1-3	06-04-1998 (06-12-1998)	ND < 1.0
TB-08B ⁽²⁾	9-11	06-04-1998 (06-12-1998)	ND < 1.0
TB-08B ⁽²⁾	15-17	06-04-1998 (06-12-1998)	ND < 1.0
TB-AAAAA	0.5-2.5	04-05-2002 (04-10-2002)	ND < 0.50
TB-BBBBB	0.5-2.5	04-05-2002 (04-10-2002)	ND < 0.50
TB-BBBBB	2.5-4.5	04-05-2002 (04-10-2002)	ND < 0.50
TB-BBBBB	4.5-5.5	04-05-2002 (04-10-2002)	ND < 0.50
TB-CCCCC	2-4	04-05-2002 (04-10-2002)	ND < 0.50
TB-CCCCC	4-5	04-05-2002 (04-10-2002)	ND < 0.50
TB-DDDDD	0.5-0.8	04-05-2002 (04-10-2002)	ND < 0.50
TB-EEEE	0.0-0.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-EEEE	0.3-2.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-EEEE	2.3-4.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-FFFF	0.5-0.8	04-04-2002 (04-08-2002)	ND < 0.50
TB-FFFF	2.5-3.5	04-04-2002 (04-08-2002)	ND < 0.50
TB-FFFF	3.5-4.5	04-04-2002 (04-08-2002)	ND < 0.50
TB-FFFFF	0.5-0.8	04-05-2002 (04-10-2002)	ND < 0.50
TB-GGGGG	0.5-1.2	04-05-2002 (04-10-2002)	ND < 0.50
TB-HHHHH	0.5-2.5	04-05-2002 (04-10-2002)	ND < 0.50
TB-HHHHH	2.5-4.5	04-05-2002 (04-10-2002)	ND < 0.50
TB-I	2-4	05-14-2001 (05-18-2001)	ND < 0.50
TB-J	2-4	05-14-2001 (05-18-2001)	ND < 0.50
TB-JJJJJ	0.3-2.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-JJJJJ	2.3-4.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-KKKKK	1-2	04-05-2002 (04-10-2002)	ND < 0.50
TB-KKKKK	4-5	04-05-2002 (04-10-2002)	ND < 0.50
TB-L	2-4	05-14-2001 (05-18-2001)	ND < 0.50
TB-UUUUU	1.2-1.5	04-05-2002 (04-11-2002)	ND < 0.50
TB-UUUUU	5-7	04-05-2002 (04-11-2002)	ND < 0.50
TB-VVVVV	0.0-0.3	04-05-2002 (04-11-2002)	ND < 0.50

Table A6.1 (cont)

Area 6.1: Former Coal Yard and Area Adjacent to Station B

AOC #:	2, 3, 12N
PCB Area Description:	Paved and unpaved areas south and west of Station B
Location Reference:	Figure
Sample Matrix:	Asphalt; concrete; soil; catch basin sediment; hexane wipe of steel surface
Analysis:	US EPA Method 8082
Units:	Milligrams per kilogram (mg/kg), dry weight; micrograms per 100 square centimeters (µg/100 sq. cm)
Laboratory Results In:	Appendix B

Characterization Samples

Sample Point	Depth (feet)	Sampling Date (Analysis Date)	Sample Result
SOIL			
TB-VVVV	0.5-2.5	04-05-2002 (04-11-2002)	ND < 0.50
TB-VVVV	2.5-4.5	04-05-2002 (04-11-2002)	ND < 0.50
TB-WWWW	2.2-2.5	04-05-2002 (04-11-2002)	ND < 0.50
TB-WWWW	2.5-4.5	04-05-2002 (04-11-2002)	ND < 0.50
TB-XXXX	0.0-0.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-XXXX	2.3-4.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-XXXX	4.3-6.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-YYYY	2.0-2.3	04-05-2002 (04-11-2002)	ND < 0.50
TB-YYYY	2.5-3.0	04-05-2002 (04-11-2002)	ND < 0.50
TB-YYYY	3-5	04-05-2002 (04-10-2002)	ND < 0.50
TB-YYYY	5-7	04-05-2002 (04-10-2002)	ND < 0.50
TB-ZZZZ	0.0-0.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-ZZZZ	0.3-2.3	04-05-2002 (04-10-2002)	ND < 0.50
TB-ZZZZ	2.3-4.3	04-05-2002 (04-10-2002)	ND < 0.50
CATCH BASIN SEDIMENT			
CB-1	0.0-0.8	05-10-2001 (05-15-2001)	ND < 0.50
HEXANE WIPE OF STEEL SURFACE			
6HX-007	NA	08-26-2004 (09-01-2004)	ND < 10
6HX-007D	NA	08-26-2004 (09-01-2004)	ND < 10
Field Blank 2	NA	08-26-2004 (09-01-2004)	ND < 5.0

Notes for Table A6.1:

(1) = Asphalt samples may include some base material (e.g., cobbles or gravel).

(2) = Result reported by GEI Consultants, Inc.

NA = Not applicable. ND = Not detected.

< = Less than minimum detection limit.

* = Equipment Blank, matrix water. ** = Detection limit based on sample size supplied for analysis.