

Table AOC-2.2

**Comparison of Confirmatory Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, AOC-2, 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		AOC2 CS2	AOC2 CS3	AOC2 CS3	AOC2 CS4	AOC2 CS4	AOC2 CS4	AOC2 CS4
Depth Below Grade (ft.)			GB Area	(5-7)	(2-4)	(5-7)	(0-2)	(2-4)	(5-7)	
Sample Collection Date				1/30/02	3/12/02	1/30/02	1/30/02	1/30/02	1/30/02	1/30/02
USEPA Method 8270 Polynuclear Aromatics (PAHs)										
Acenaphthylene	1,000	2,500	84	ND<0.20	NT	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.20
Anthracene	1,000	2,500	400	ND<0.20	NT	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.20
Benzo[a]anthracene	1	7.8	1	0.72	NT	0.29	0.64	ND<0.20	0.61	0.59
Benzo[b]fluoranthene	1	7.8	1	1.40	NT	0.49	1.10	ND<0.20	1.20	1.20
Benzo[g,h,i]perylene	1,000	2,500	42	0.36	NT	ND<0.20	0.34	ND<0.20	0.29	0.31
Benzo[k]fluoranthene	8.4	78	1	0.65	NT	0.24	0.48	ND<0.20	0.48	0.52
Benzo[a]pyrene	1	1	1	0.93	NT	0.36	0.85	ND<0.20	0.79	0.82
Chrysene	84	780	1	0.67	NT	0.27	0.58	ND<0.20	0.57	0.55
Dibenz[a,h]anthracene	1	1	1	ND<0.20	NT	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.20
Fluoranthene	1,000	2,500	56	1.20	NT	0.47	0.87	ND<0.20	1.10	0.99
Indeno[1,2,3-cd]pyrene	1	7.8	1	0.38	NT	ND<0.20	0.39	ND<0.20	0.33	0.34
Phenanthrene	1,000	2,500	40	0.31	NT	ND<0.20	0.29	ND<0.20	0.54	0.35
Pyrene	1,000	2,500	40	1.20	NT	0.44	0.98	ND<0.20	1.00	1.00
USEPA Method 8260 Volatile Organic Compounds (VOCs)										
	NA	NA	NA	NT	ND	NT	ND	NT	NT	ND
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)										
	NA	NA	NA	NT	ND	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)										
	500	2,500	2,500	ND<50	NT	ND<50	55	ND<50	ND<50	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.
- ☐ = Concentration exceeds associated criterion.

Table AOC-2.2

**Comparison of Confirmatory Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, AOC-2, 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	AOC2 CS5	AOC2 CS5	AOC2 CS6	AOC2 CS6	AOC2 CS6	AOC2 CS6	AOC2 CS6
Depth Below Grade (ft.)				(2-4)	(5-7)	(0-0.25)	(0-2)	(0-2)	(2-4)	(2-4)
Sample Collection Date				1/30/02	1/30/02	3/12/02	1/30/02	3/12/02	1/30/02	3/12/02
USEPA Method 8270 Polynuclear Aromatics (PAHs)										
Acenaphthylene	1,000	2,500	84	ND<0.20	ND<0.20	NT	ND<0.20	NT	ND<0.20	NT
Anthracene	1,000	2,500	400	ND<0.20	ND<0.20	NT	ND<0.20	NT	ND<0.20	NT
Benzo[a]anthracene	1	7.8	1	0.34	0.57	NT	ND<0.20	NT	0.57	NT
Benzo[b]fluoranthene	1	7.8	1	0.62	1.00	NT	ND<0.20	NT	1.20	NT
Benzo[g,h,i]perylene	1,000	2,500	42	ND<0.20	0.27	NT	ND<0.20	NT	0.36	NT
Benzo[k]fluoranthene	8.4	78	1	0.30	0.56	NT	ND<0.20	NT	0.60	NT
Benzo[a]pyrene	1	1	1	0.40	0.77	NT	ND<0.20	NT	0.87	NT
Chrysene	84	780	1	0.28	0.51	NT	ND<0.20	NT	0.51	NT
Dibenz[a,h]anthracene	1	1	1	ND<0.20	ND<0.20	NT	ND<0.20	NT	ND<0.20	NT
Fluoranthene	1,000	2,500	56	0.55	0.86	NT	ND<0.20	NT	0.96	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	ND<0.20	0.33	NT	ND<0.20	NT	0.35	NT
Phenanthrene	1,000	2,500	40	ND<0.20	0.31	NT	ND<0.20	NT	0.48	NT
Pyrene	1,000	2,500	40	0.51	0.91	NT	ND<0.20	NT	0.92	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)										
	NA	NA	NA	NT	ND	NT	NT	ND	ND	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)										
	NA	NA	NA	NT	NT	ND	NT	ND	NT	ND
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)										
	500	2,500	2,500	ND<50	56	NT	ND<50	NT	80	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.
- ☐ = Concentration exceeds associated criterion.

Table AOC-2.2
Comparison of Confirmatory Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, AOC-2, 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		AOC2 CS6		AOC2 CS7	AOC2 CS7	AOC2 CS8	AOC2 CS9
Depth Below Grade (ft.)			GB Area	(5-7)		(2-4)		(7-7.5)	
Sample Collection Date				1/30/02	3/12/02	1/30/02	1/30/02	1/30/02	1/30/02
USEPA Method 8270 Polynuclear Aromatics (PAHs)									
Acenaphthylene	1,000	2,500	84	ND<0.20	NT	0.20	ND<0.20	ND<0.20	ND<0.20
Anthracene	1,000	2,500	400	ND<0.20	NT	0.37	ND<0.20	ND<0.20	ND<0.20
Benzo[a]anthracene	1	7.8	1	0.90	NT	1.10	0.91	0.26	0.46
Benzo[b]fluoranthene	1	7.8	1	2.10	NT	2.00	1.90	0.59	0.96
Benzo[g,h,i]perylene	1,000	2,500	42	0.45	NT	0.50	0.51	ND<0.20	0.25
Benzo[k]fluoranthene	8.4	78	1	0.76	NT	1.10	0.72	0.33	0.51
Benzo[a]pyrene	1	1	1	1.30	NT	1.50	1.40	0.43	0.66
Chrysene	84	780	1	0.77	NT	0.92	0.80	0.23	0.41
Dibenz[a,h]anthracene	1	1	1	ND<0.20	NT	ND<0.20	ND<0.20	ND<0.20	ND<0.20
Fluoranthene	1,000	2,500	56	1.70	NT	2.10	1.70	0.39	0.69
Indeno[1,2,3-cd]pyrene	1	7.8	1	0.48	NT	0.61	0.55	ND<0.20	0.28
Phenanthrene	1,000	2,500	40	0.67	NT	0.94	0.55	ND<0.20	0.28
Pyrene	1,000	2,500	40	1.60	NT	2.10	1.80	0.41	0.73
USEPA Method 8260 Volatile Organic Compounds (VOCs)	NA	NA	NA	ND	NT	ND	ND	ND	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	NA	NA	NA	NT	ND	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (ETPH)	500	2,500	2,500	130	NT	55	170	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.
- ☐ = Concentration exceeds associated criterion.

Table AOC-2.4
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, AOC-2, New Haven, CT
Sampling Date: July 18, 2001

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/Commercial		TB-AA/ MW-J	TB-AA/ MW-J	TB-AA/ MW-J	TB-AA/ MW-J	TB-BB/ MW-K	TB-BB/ MW-K
Depth Below Grade (ft.)			GB Area	(0-2)	(2-4)	(5-6.5)	(10-12)	(0-2)	(2-4)
USEPA Method 8270 Polynuclear Aromatics									
Acenaphthene	1,000	2,500	84	NT	NT	NT	NT	ND<0.2	ND<0.2
Acenaphthylene	1,000	2,500	84	NT	NT	NT	NT	ND<0.2	ND<0.2
Anthracene	1,000	2,500	400	NT	NT	NT	NT	ND<0.2	ND<0.2
Benzo[a]anthracene	1	7.8	1	NT	NT	NT	NT	0.39	0.65
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	NT	0.45	0.91
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	NT	0.38	0.55
Benzo[k]fluoranthene	8.4	78	1	NT	NT	NT	NT	ND<0.2	0.48
Benzo[a]pyrene	1	1	1	NT	NT	NT	NT	0.39	0.73
Chrysene	84	780	1	NT	NT	NT	NT	0.24	0.39
Dibenz[a,h]anthracene	1	1	1	NT	NT	NT	NT	ND<0.2	ND<0.2
Fluoranthene	1,000	2,500	56	NT	NT	NT	NT	0.52	1.1
Fluorene	1,000	2,500	56	NT	NT	NT	NT	ND<0.2	ND<0.2
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	NT	NT	0.36	0.51
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	ND<0.2	ND<0.2
Phenanthrene	1,000	2,500	40	NT	NT	NT	NT	0.21	0.48
Pyrene	1,000	2,500	40	NT	NT	NT	NT	0.52	0.80
Total Metals									
Arsenic	10	10	NA	1.7	1.1	ND<1.0	1.0	1.1	1.2
Barium	4,700	140,000	NA	62	120	27	20	38	41
Cadmium	34	1,000	NA	0.82	0.59	0.69	ND<0.50	0.55	0.53
Chromium	100*	100*	NA	18	8.0	10	5.8	11	10
Copper	2,500	76,000	NA	27	23	39	23	36	30
Lead	500	1,000	NA	8.8	28	30	36	35	42

Table AOC-2.4
**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, AOC-2, New Haven, CT
Sampling Date: July 18, 2001**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-AA/ MW-J	TB-AA/ MW-J	TB-AA/ MW-J	TB-AA/ MW-J	TB-BB/ MW-K	TB-BB/ MW-K
Depth Below Grade (ft.)			GB Area	(0-2)	(2-4)	(5-6.5)	(10-12)	(0-2)	(2-4)
Nickel	1,400	7,500	NA	16	6.6	12	5.2	8.0	7.6
Silver	340	10,000	NA	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
Zinc	20,000	610,000	NA	37	41	38	35	39	47
SPLP Metals									
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	NT	230	520

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 AOC-2.4

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, AOC-2, New Haven, CT
Sampling Date: July 18, 2001

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-BB/ MW-K (5-5.9)	TB-BB/ MW-K (10-12)	TB-CC (0-2)	TB-CC (2-4)	TB-CC (5-7)	TB-CC (10-12)
Depth Below Grade (ft.)			GB Area						
USEPA Method 8270 Polynuclear Aromatics									
Acenaphthene	1,000	2,500	84	ND<0.2	ND<0.2	NT	ND<0.2	ND<0.2	NT
Acenaphthylene	1,000	2,500	84	0.25	ND<0.2	NT	ND<0.2	ND<0.2	NT
Anthracene	1,000	2,500	400	0.41	ND<0.2	NT	ND<0.2	ND<0.2	NT
Benzo[a]anthracene	1	7.8	1	1.6	0.47	NT	0.53	1.0	NT
Benzo[b]fluoranthene	1	7.8	1	1.8	0.59	NT	0.68	1.5	NT
Benzo[g,h,i]perylene	1,000	2,500	42	0.81	0.58	NT	0.45	0.89	NT
Benzo[k]fluoranthene	8.4	78	1	0.76	0.31	NT	0.33	0.58	NT
Benzo[a]pyrene	1	1	1	1.8	0.54	NT	0.61	1.2	NT
Chrysene	84	780	1	1.0	0.28	NT	0.25	0.62	NT
Dibenz[a,h]anthracene	1	1	1	0.26	ND<0.2	NT	ND<0.2	0.27	NT
Fluoranthene	1,000	2,500	56	4.2	0.67	NT	0.89	1.8	NT
Fluorene	1,000	2,500	56	ND<0.2	ND<0.2	NT	ND<0.2	ND<0.2	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	0.84	0.41	NT	0.40	0.80	NT
Naphthalene	1,000	2,500	56	ND<0.2	ND<0.2	NT	ND<0.2	ND<0.2	NT
Phenanthrene	1,000	2,500	40	0.96	0.26	NT	0.43	0.65	NT
Pyrene	1,000	2,500	40	5.0	0.64	NT	0.57	1.8	NT
Total Metals									
Arsenic	10	10	NA	ND<1.0	1.0	1.5	1.0	1.6	1.1
Barium	4,700	140,000	NA	42	50	41	33	41	32
Cadmium	34	1,000	NA	0.56	ND<0.50	0.56	0.53	0.76	ND<0.50
Chromium	100*	100*	NA	10	11	8.9	9.4	11	7.3
Copper	2,500	76,000	NA	31	24	94	35	34	27
Lead	500	1,000	NA	28	29	29	45	39	37

Table AOC-2.4
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, AOC-2, New Haven, CT
Sampling Date: July 18, 2001

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-BB/ MW-K (5-5.9)	TB-BB/ MW-K (10-12)	TB-CC (0-2)	TB-CC (2-4)	TB-CC (5-7)	TB-CC (10-12)
Depth Below Grade (ft.)			GB Area						
Nickel	1,400	7,500	NA	8.1	7.6	7.8	7.7	8.7	6.0
Silver	340	10,000	NA	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
Zinc	20,000	610,000	NA	31	37	38	55	42	35
SPLP Metals									
Arsenic	NA	NA	0.5	NT	NT	NT	ND<0.05	NT	NT
Barium	NA	NA	10	NT	NT	NT	0.37	NT	NT
Zinc	NA	NA	50	NT	NT	NT	0.18	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	790	140	NT	270	210	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 AOC-2.4

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, AOC-2, New Haven, CT
Sampling Date: July 18, 2001**

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-DD (0-2)	TB-DD (2-4)	TB-DD (5-6)	TB-DD (10-12)	TB-EE (0-2)	TB-EE (2-4)
Depth Below Grade (ft.)									
USEPA Method 8270 Polynuclear Aromatics									
Acenaphthene	1,000	2,500	84	ND<0.2	ND<0.2	ND<0.2	NT	NT	8.3
Acenaphthylene	1,000	2,500	84	ND<0.2	ND<0.2	ND<0.2	NT	NT	2.6
Anthracene	1,000	2,500	400	ND<0.2	ND<0.2	ND<0.2	NT	NT	20
Benzo[a]anthracene	1	7.8	1	ND<0.2	0.48	0.98	NT	NT	17
Benzo[b]fluoranthene	1	7.8	1	ND<0.2	0.73	2.6	NT	NT	60
Benzo[g,h,i]perylene	1,000	2,500	42	ND<0.2	0.50	1.2	NT	NT	6.0
Benzo[k]fluoranthene	8.4	78	1	ND<0.2	0.36	0.98	NT	NT	16
Benzo[a]pyrene	1	1	1	ND<0.2	0.64	2.0	NT	NT	35
Chrysene	84	780	1	ND<0.2	0.26	0.52	NT	NT	19
Dibenz[a,h]anthracene	1	1	1	ND<0.2	ND<0.2	0.32	NT	NT	2.8
Fluoranthene	1,000	2,500	56	ND<0.2	0.76	1.6	NT	NT	64
Fluorene	1,000	2,500	56	ND<0.2	ND<0.2	ND<0.2	NT	NT	10
Indeno[1,2,3-cd]pyrene	1	7.8	1	ND<0.2	0.42	1.1	NT	NT	7.6
Naphthalene	1,000	2,500	56	ND<0.2	ND<0.2	ND<0.2	NT	NT	0.55
Phenanthrene	1,000	2,500	40	ND<0.2	0.55	0.29	NT	NT	70
Pyrene	1,000	2,500	40	ND<0.2	0.64	1.9	NT	NT	54
Total Metals									
Arsenic	10	10	NA	1.5	ND<1.0	1.1	1.2	1.5	ND<1.0
Barium	4,700	140,000	NA	47	30	30	37	49	41
Cadmium	34	1,000	NA	0.77	0.58	ND<0.50	ND<0.50	0.77	0.55
Chromium	100*	100*	NA	18	8.5	9.7	9.0	20	11
Copper	2,500	76,000	NA	27	30	30	27	24	27
Lead	500	1,000	NA	8.0	34	41	44	8.8	19


Table AOC-2.4
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, AOC-2, New Haven, CT
Sampling Date: July 18, 2001

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-DD (0-2)	TB-DD (2-4)	TB-DD (5-6)	TB-DD (10-12)	TB-EE (0-2)	TB-EE (2-4)
Depth Below Grade (ft.)			GB Area						
Nickel	1,400	7,500	NA	17	6.4	8.5	6.9	17	8.8
Silver	340	10,000	NA	ND<2.0	ND<2.0	3.3	ND<2.0	ND<2.0	ND<2.0
Zinc	20,000	610,000	NA	38	42	44	43	39	38
SPLP Metals									
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	220	310	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 AOC-2.4

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, AOC-2, New Haven, CT
Sampling Date: July 18, 2001

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-EE (5-7)	TB-EE (10-11)	TB-FF (0-2)	TB-FF (2-4)	TB-FF (5-7)	TB-GG (0-2)
Depth Below Grade (ft.)			GB Area						
USEPA Method 8270 Polynuclear Aromatics									
Acenaphthene	1,000	2,500	84	ND<0.2	ND<0.2	NT	NT	ND<0.2	NT
Acenaphthylene	1,000	2,500	84	ND<0.2	ND<0.2	NT	NT	0.21	NT
Anthracene	1,000	2,500	400	ND<0.2	ND<0.2	NT	NT	ND<0.2	NT
Benzo[a]anthracene	1	7.8	1	0.60	1.0	NT	NT	0.99	NT
Benzo[b]fluoranthene	1	7.8	1	0.92	1.7	NT	NT	1.7	NT
Benzo[g,h,i]perylene	1,000	2,500	42	0.46	0.72	NT	NT	0.94	NT
Benzo[k]fluoranthene	8.4	78	1	0.44	0.86	NT	NT	0.74	NT
Benzo[a]pyrene	1	1	1	0.55	1.0	NT	NT	1.4	NT
Chrysene	84	780	1	0.25	0.56	NT	NT	0.64	NT
Dibenz[a,h]anthracene	1	1	1	ND<0.2	0.23	NT	NT	0.23	NT
Fluoranthene	1,000	2,500	56	0.74	1.6	NT	NT	1.3	NT
Fluorene	1,000	2,500	56	ND<0.2	ND<0.2	NT	NT	ND<0.2	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	0.42	0.77	NT	NT	0.85	NT
Naphthalene	1,000	2,500	56	ND<0.2	ND<0.2	NT	NT	ND<0.2	NT
Phenanthrene	1,000	2,500	40	ND<0.2	0.44	NT	NT	0.26	NT
Pyrene	1,000	2,500	40	0.80	1.7	NT	NT	1.7	NT
Total Metals									
Arsenic	10	10	NA	ND<1.0	ND<1.0	1.5	ND<1.0	1.0	2.6
Barium	4,700	140,000	NA	37	31	51	36	36	41
Cadmium	34	1,000	NA	0.60	ND<0.50	0.82	0.53	0.55	1.1
Chromium	100*	100*	NA	9.9	6.4	21	7.2	8.4	39
Copper	2,500	76,000	NA	30	15	27	22	28	31
Lead	500	1,000	NA	33	15	7.4	30	59	6.1

Table AOC-2.4

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, AOC-2, New Haven, CT
Sampling Date: July 18, 2001

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-EE (5-7)	TB-EE (10-11)	TB-FF (0-2)	TB-FF (2-4)	TB-FF (5-7)
Depth Below Grade (ft.)									
Nickel	1,400	7,500	NA	7.6	5.0	16	6.1	7.1	22
Silver	340	10,000	NA	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
Zinc	20,000	610,000	NA	220	22	39	34	38	42
SPLP Metals									
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT	NT
Zinc	NA	NA	50	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 Leachate Procedure. Units are milligrams per liter (mg/L).

• = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

Table AOC-2.4
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, AOC-2, New Haven, CT
Sampling Date: July 18, 2001

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)					
	Residential	Industrial/ Commercial		TB-GG (2-4)	TB-GG (5-7)	TB-HH (0-2)	TB-HH (2-4)	TB-HH (5-7)	TB-HH (10-12)
Depth Below Grade (ft.)									
USEPA Method 8270 Polynuclear Aromatics									
Acenaphthene	1,000	2,500	84	ND<0.2	NT	ND<0.2	ND<0.2	ND<0.2	ND<0.2
Acenaphthylene	1,000	2,500	84	ND<0.2	NT	ND<0.2	ND<0.2	ND<0.2	ND<0.2
Anthracene	1,000	2,500	400	ND<0.2	NT	ND<0.2	ND<0.2	ND<0.2	ND<0.2
Benzo[a]anthracene	1	7.8	1	0.65	NT	0.36	0.39	0.59	0.22
Benzo[b]fluoranthene	1	7.8	1	1.0	NT	0.51	0.71	1.3	0.29
Benzo[g,h,i]perylene	1,000	2,500	42	0.54	NT	0.21	0.41	0.95	ND<0.2
Benzo[k]fluoranthene	8.4	78	1	0.58	NT	0.33	0.37	0.73	ND<0.2
Benzo[a]pyrene	1	1	1	0.91	NT	0.46	0.41	1.0	0.39
Chrysene	84	780	1	0.42	NT	0.22	0.25	0.31	ND<0.2
Dibenz[a,h]anthracene	1	1	1	0.21	NT	ND<0.2	ND<0.2	ND<0.2	ND<0.2
Fluoranthene	1,000	2,500	56	1.4	NT	0.72	0.59	0.74	ND<0.2
Fluorene	1,000	2,500	56	ND<0.2	NT	ND<0.2	ND<0.2	ND<0.2	ND<0.2
Indeno[1,2,3-cd]pyrene	1	7.8	1	0.56	NT	0.29	0.38	0.86	ND<0.2
Naphthalene	1,000	2,500	56	ND<0.2	NT	ND<0.2	ND<0.2	ND<0.2	ND<0.2
Phenanthrene	1,000	2,500	40	0.53	NT	0.87	0.36	0.26	ND<0.2
Pyrene	1,000	2,500	40	0.84	NT	0.51	0.50	0.59	0.24
Total Metals									
Arsenic	10	10	NA	1.4	1.7	1.1	1.5	1.6	ND<1.0
Barium	4,700	140,000	NA	44	40	42	38	33	37
Cadmium	34	1,000	NA	0.56	0.65	0.57	0.61	0.53	ND<0.50
Chromium	100*	100*	NA	8.7	10	12	19	8.8	7.5
Copper	2,500	76,000	NA	28	43	26	31	35	18
Lead	500	1,000	NA	29	39	24	23	43	16

Table AOC-2.4

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, AOC-2, New Haven, CT
Sampling Date: July 18, 2001**

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-GG (2-4)	TB-GG (5-7)	TB-HH (0-2)	TB-HH (2-4)	TB-HH (5-7)	TB-HH (10-12)
Depth Below Grade (ft.)									
Nickel	1,400	7,500	NA	8.1	14	8.7	8.8	7.7	5.6
Silver	340	10,000	NA	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
Zinc	20,000	610,000	NA	42	86	34	41	44	31
SPLP Metals									
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	130	230	710

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 YY
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, Southwest Portion, New Haven, CT
Sampling Date: February 13, 2002

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-AAA (0-2)	TB-AAA (2-4)	TB-AAA (5-7)	TB-AAA (10-12)	TB-AAA (15-17)	TB-BBB (1-3)
Depth Below Grade (ft.)										
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)										
Acenaphthene	1,000	2,500	84	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	ND<0.20	ND<0.20
Acenaphthylene	1,000	2,500	84	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	ND<0.20	ND<0.20
Anthracene	1,000	2,500	400	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	ND<0.20	ND<0.20
Benzo[a]anthracene	1	7.8	1	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	0.91	ND<0.20
Benzo[b]fluoranthene	1	7.8	1	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	1.33	ND<0.20
Benzo[g,h,i]perylene	1,000	2,500	42	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	0.24	ND<0.20
Benzo[k]fluoranthene	8.4	78	1	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	0.51	ND<0.20
Benzo[a]pyrene	1	1	1	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	0.74	ND<0.20
Chrysene	84	780	1	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	0.92	ND<0.20
Dibenz[a,h]anthracene	1	1	1	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	ND<0.20	ND<0.20
Fluoranthene	1,000	2,500	56	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	1.0	ND<0.20
Fluorene	1,000	2,500	56	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	ND<0.20	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	0.30	ND<0.20
Naphthalene	1,000	2,500	56	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	ND<0.20	ND<0.20
Phenanthrene	1,000	2,500	40	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	0.37	ND<0.20
Pyrene	1,000	2,500	40	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	0.88	ND<0.20
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)										
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NT	ND<0.50	15
SPLP PCBs										
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT	NT	0.00074
USEPA Method 8260 Volatile Organic Compounds (VOCs)										
4-Isopropyltoluene	500	1,000	41.8	NT	NT	0.0075	NT	NT	NT	NT

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, Southwest Portion, New Haven, CT
Sampling Date: February 13, 2002**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)						
	Residential	Industrial/ Commercial		TB-AAA (0-2)	TB-AAA (2-4)	TB-AAA (5-7)	TB-AAA (10-12)	TB-AAA (15-17)	TB-BBB (1-3)	TB-BBB (3-5)
Depth Below Grade (ft.)			GB Area							
SPLP Metals										
Barium	NA	NA	10	0.50	NT	NT	NT	NT	0.35	NT
Lead	NA	NA	0.15	ND<0.013	NT	NT	NT	NT	ND<0.013	NT
Vanadium	NA	NA	0.50	ND<0.05	NT	NT	NT	NT	ND<0.05	NT
Zinc	NA	NA	50	0.20	NT	NT	NT	NT	0.26	NT
Total Metals										
Arsenic	10	10	NA	ND<1.0	ND<1.0	3.4	5.9	4.2	17	ND<1.0
Barium	4,700	140,000	NA	19	NT	NT	NT	NT	34	NT
Cadmium	34	1,000	NA	ND<0.50	NT	NT	NT	NT	1.4	NT
Chromium	100*	100*	NA	3.5	NT	NT	NT	NT	5.8	NT
Copper	2,500	76,000	NA	5.2	NT	NT	NT	NT	40	NT
Lead	500	1,000	NA	43	NT	NT	NT	NT	58	NT
Mercury	20	610	NA	ND<0.20	NT	NT	NT	NT	0.61	NT
Nickel	1,400	7,500	NA	2.4	NT	NT	NT	NT	7.3	NT
Thallium	5.4	160	NA	ND<2.0	NT	NT	NT	NT	5.1	NT
Vanadium	470	14,000	NA	6.4	NT	NT	NT	NT	11	NT
Zinc	20,000	610,000	NA	13	NT	NT	NT	NT	35	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	ND<50	ND<50	ND<50	ND<50	NT	ND<50	210
RSR Pesticides/Herbicides	NA	NA	NA	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.
- RSR = Remediation Standard Regulations.
- 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 YY

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, Southwest Portion, New Haven, CT
Sampling Date: February 13, 2002**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)						
	Residential	Industrial/ Commercial		TB-BBB (5-7)	TB-BBB (10-13)	TB-CCC (0-2)	TB-CCC (2-2.5)	TB-CCC (5-7)	TB-CCC (10-13)	TB-DDD (0-2)
Depth Below Grade (ft.)										
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)										
Acenaphthene	1,000	2,500	84	NT	NT	ND<0.20	NT	ND<0.20	ND<0.20	ND<0.20
Acenaphthylene	1,000	2,500	84	NT	NT	ND<0.20	NT	ND<0.20	ND<0.20	ND<0.20
Anthracene	1,000	2,500	400	NT	NT	ND<0.20	NT	ND<0.20	ND<0.20	ND<0.20
Benzo[a]anthracene	1	7.8	1	NT	NT	0.52	NT	ND<0.20	ND<0.20	0.83
Benzo[b]fluoranthene	1	7.8	1	NT	NT	0.70	NT	ND<0.20	0.21	1.43
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	0.21	NT	ND<0.20	ND<0.20	0.28
Benzo[k]fluoranthene	8.4	78	1	NT	NT	0.35	NT	ND<0.20	ND<0.20	0.69
Benzo[a]pyrene	1	1	1	NT	NT	0.47	NT	ND<0.20	ND<0.20	0.83
Chrysene	84	780	1	NT	NT	0.50	NT	ND<0.20	ND<0.20	0.88
Dibenz[a,h]anthracene	1	1	1	NT	NT	ND<0.20	NT	ND<0.20	ND<0.20	ND<0.20
Fluoranthene	1,000	2,500	56	NT	NT	0.87	NT	ND<0.20	0.23	1.4
Fluorene	1,000	2,500	56	NT	NT	ND<0.20	NT	ND<0.20	ND<0.20	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	NT	ND<0.20	NT	ND<0.20	ND<0.20	0.34
Naphthalene	1,000	2,500	56	NT	NT	ND<0.20	NT	ND<0.20	ND<0.20	0.80
Phenanthrene	1,000	2,500	40	NT	NT	0.69	NT	ND<0.20	ND<0.20	0.67
Pyrene	1,000	2,500	40	NT	NT	0.73	NT	ND<0.20	0.31	1.3
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)										
PCB-1260	1	10	NA	15	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
SPLP PCBs										
PCB-1260	NA	NA	0.005	0.00072	NT	NT	NT	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)										
4-Isopropyltoluene	500	1,000	41.8	ND<0.005	NT	NT	NT	NT	NT	NT

Table YY

**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, Southwest Portion, New Haven, CT
Sampling Date: February 13, 2002**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)						
	Residential	Industrial/ Commercial		TB-BBB	TB-BBB	TB-CCC	TB-CCC	TB-CCC	TB-CCC	TB-DDD
Depth Below Grade (ft.)			GB Area	(5-7)	(10-13)	(0-2)	(2-2.5)	(5-7)	(10-13)	(0-2)
SPLP Metals										
Barium	NA	NA	10	NT	NT	0.32	NT	NT	NT	NT
Lead	NA	NA	0.15	NT	NT	ND<0.013	NT	NT	NT	NT
Vanadium	NA	NA	0.50	NT	NT	ND<0.05	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	0.49	NT	NT	NT	NT
Total Metals										
Arsenic	10	10	NA	5.6	5.4	36	21	11	4.5	29
Barium	4,700	140,000	NA	NT	NT	44	NT	NT	NT	NT
Cadmium	34	1,000	NA	NT	NT	0.81	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	4.8	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	47	NT	NT	NT	NT
Lead	500	1,000	NA	NT	NT	57	NT	NT	NT	NT
Mercury	20	610	NA	NT	NT	0.84	NT	NT	NT	NT
Nickel	1,400	7,500	NA	NT	NT	7.3	NT	NT	NT	NT
Thallium	5.4	160	NA	NT	NT	2.5	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	14	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	76	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	1,100	ND<50	ND<50	NT	ND<50	ND<50	ND<50
RSR Pesticides/Herbicides	NA	NA	NA	NT	NT	ND	NT	NT	NT	ND

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.
- RSR = Remediation Standard Regulations.
- 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 Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, Southwest Portion, New Haven, CT
Sampling Date: February 13, 2002**

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-DDD	TB-DDD	TB-EEE	TB-EEE	TB-EEE	TB-EEE
Depth Below Grade (ft.)			GB Area	(2-4)	(5-7)	(10-12)	(1-3)	(3-5)	(5-7)	(10-12)
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)										
Acenaphthene	1,000	2,500	84	ND<0.20	0.51	ND<0.20	ND<0.20	ND<0.20	NT	NT
Acenaphthylene	1,000	2,500	84	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	NT
Anthracene	1,000	2,500	400	ND<0.20	1.0	ND<0.20	ND<0.20	ND<0.20	NT	NT
Benzo[a]anthracene	1	7.8	1	ND<0.20	2.3	0.43	0.21	ND<0.20	NT	NT
Benzo[b]fluoranthene	1	7.8	1	0.26	2.6	0.52	0.33	ND<0.20	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	ND<0.20	0.51	ND<0.20	ND<0.20	ND<0.20	NT	NT
Benzo[k]fluoranthene	8.4	78	1	ND<0.20	1.1	0.26	ND<0.20	ND<0.20	NT	NT
Benzo[a]pyrene	1	1	1	ND<0.20	2.1	0.41	0.22	ND<0.20	NT	NT
Chrysene	84	780	1	ND<0.20	1.9	0.39	ND<0.20	ND<0.20	NT	NT
Dibenz[a,h]anthracene	1	1	1	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.20	NT	NT
Fluoranthene	1,000	2,500	56	0.32	6.2	0.62	0.34	ND<0.20	NT	NT
Fluorene	1,000	2,500	56	ND<0.20	0.59	ND<0.20	ND<0.20	ND<0.20	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	ND<0.20	0.64	ND<0.20	ND<0.20	ND<0.20	NT	NT
Naphthalene	1,000	2,500	56	ND<0.20	0.52	ND<0.20	ND<0.20	ND<0.20	NT	NT
Phenanthrene	1,000	2,500	40	ND<0.20	5.1	0.30	ND<0.20	ND<0.20	NT	NT
Pyrene	1,000	2,500	40	0.31	5.1	0.69	0.34	ND<0.20	NT	NT
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)										
PCB-1260	1	10	NA	NT	NT	NT	NT	NT	NT	NT
SPLP PCBs										
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)										
4-Isopropyltoluene	500	1,000	41.8	NT	NT	NT	NT	NT	NT	NT



**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, Southwest Portion, New Haven, CT
Sampling Date: February 13, 2002**

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-DDD	TB-DDD	TB-DDD	TB-EEE	TB-EEE	TB-EEE
Depth Below Grade (ft.)				(2-4)	(5-7)	(10-12)	(1-3)	(3-5)	(5-7)	(10-12)
SPLP Metals										
Barium	NA	NA	10	0.40	NT	NT	0.46	NT	NT	NT
Lead	NA	NA	0.15	0.02	NT	NT	ND<0.013	NT	NT	NT
Vanadium	NA	NA	0.50	ND<0.05	NT	NT	ND<0.05	NT	NT	NT
Zinc	NA	NA	50	0.18	NT	NT	0.31	NT	NT	NT
Total Metals										
Arsenic	10	10	NA	4.2	12	22	3.5	3.5	3.8	5.8
Barium	4,700	140,000	NA	35	NT	NT	22	NT	NT	NT
Cadmium	34	1,000	NA	0.97	NT	NT	0.94	NT	NT	NT
Chromium	100*	100*	NA	10	NT	NT	11	NT	NT	NT
Copper	2,500	76,000	NA	15	NT	NT	20	NT	NT	NT
Lead	500	1,000	NA	94	NT	NT	15	NT	NT	NT
Mercury	20	610	NA	0.55	NT	NT	ND<0.20	NT	NT	NT
Nickel	1,400	7,500	NA	6.2	NT	NT	6.8	NT	NT	NT
Thallium	5.4	160	NA	2.8	NT	NT	3.2	NT	NT	NT
Vanadium	470	14,000	NA	16	NT	NT	15	NT	NT	NT
Zinc	20,000	610,000	NA	40	NT	NT	26	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	ND<50	ND<50	NT	ND<50	ND<50	NT	NT
RSR Pesticides/Herbicides	NA	NA	NA	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.
- RSR = Remediation Standard Regulations.
- 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 Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, Southwest Portion, New Haven, CT
Sampling Date: February 13, 2002**

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-FFF (0-2)	TB-FFF (2-4)	TB-FFF (5-7)	TB-FFF (10-12)	TB-GGG (0-1.2)	TB-GGG (2-4)
Depth Below Grade (ft.)										
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)										
Acenaphthene	1,000	2,500	84	ND<0.20	ND<0.20	5.5	2.6	ND<0.20	ND<0.20	ND<0.20
Acenaphthylene	1,000	2,500	84	ND<0.20	ND<0.20	0.37	0.40	ND<0.20	ND<0.20	ND<0.20
Anthracene	1,000	2,500	400	ND<0.20	ND<0.20	24	2.6	ND<0.20	ND<0.20	ND<0.20
Benzo[a]anthracene	1	7.8	1	ND<0.20	ND<0.20	34	5.6	0.45	ND<0.20	ND<0.20
Benzo[b]fluoranthene	1	7.8	1	ND<0.20	0.24	44	7.3	0.75	0.28	ND<0.20
Benzo[g,h,i]perylene	1,000	2,500	42	ND<0.20	ND<0.20	4.8	1.4	ND<0.20	ND<0.20	ND<0.20
Benzo[k]fluoranthene	8.4	78	1	ND<0.20	ND<0.20	12	2.7	0.33	ND<0.20	ND<0.20
Benzo[a]pyrene	1	1	1	ND<0.20	ND<0.20	79	5.4	0.45	ND<0.20	ND<0.20
Chrysene	84	780	1	ND<0.20	ND<0.20	30	4.6	0.46	ND<0.20	ND<0.20
Dibenz[a,h]anthracene	1	1	1	ND<0.20	ND<0.20	1.6	0.23	ND<0.20	ND<0.20	ND<0.20
Fluoranthene	1,000	2,500	56	0.22	0.27	125	17	0.87	0.29	ND<0.20
Fluorene	1,000	2,500	56	ND<0.20	ND<0.20	5.6	1.8	ND<0.20	ND<0.20	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	ND<0.20	ND<0.20	5.7	1.5	ND<0.20	ND<0.20	ND<0.20
Naphthalene	1,000	2,500	56	ND<0.20	ND<0.20	0.22	6.5	ND<0.20	ND<0.20	ND<0.20
Phenanthrene	1,000	2,500	40	ND<0.20	ND<0.20	22	12	0.47	ND<0.20	ND<0.20
Pyrene	1,000	2,500	40	0.21	0.25	130	16	0.78	0.30	ND<0.20
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)										
PCB-1260	1	10	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NT	NT	NT
SPLP PCBs										
PCB-1260	NA	NA	0.005	NT	NT	NT	NT	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)										
4-Isopropyltoluene	500	1,000	41.8	NT	NT	ND<0.005	ND<0.005	NT	NT	NT



**Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, Southwest Portion, New Haven, CT
Sampling Date: February 13, 2002**

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)						
	Residential	Industrial/ Commercial		TB-FFF (0-2)	TB-FFF (2-4)	TB-FFF (5-7)	TB-FFF (10-12)	TB-GGG (0-1.2)	TB-GGG (2-4)	TB-GGG (5-7)
Depth Below Grade (ft.)			GB Area							
SPLP Metals										
Barium	NA	NA	10	NT	0.25	NT	NT	NT	0.37	NT
Lead	NA	NA	0.15	NT	ND<0.013	NT	NT	NT	ND<0.013	NT
Vanadium	NA	NA	0.50	NT	ND<0.05	NT	NT	NT	0.17	NT
Zinc	NA	NA	50	NT	0.16	NT	NT	NT	0.17	NT
Total Metals										
Arsenic	10	10	NA	2.2	1.9	16	6.5	1.8	ND<1.0	ND<1.0
Barium	4,700	140,000	NA	NT	15	NT	NT	NT	22	NT
Cadmium	34	1,000	NA	NT	0.50	NT	NT	NT	0.59	NT
Chromium	100*	100*	NA	NT	4.9	NT	NT	NT	5.2	NT
Copper	2,500	76,000	NA	NT	28	NT	NT	NT	26	NT
Lead	500	1,000	NA	NT	8.7	NT	NT	NT	14	NT
Mercury	20	610	NA	NT	ND<0.20	NT	NT	NT	ND<0.20	NT
Nickel	1,400	7,500	NA	NT	5.3	NT	NT	NT	5.6	NT
Thallium	5.4	160	NA	NT	2.4	NT	NT	NT	ND<2.0	NT
Vanadium	470	14,000	NA	NT	11	NT	NT	NT	27	NT
Zinc	20,000	610,000	NA	NT	16	NT	NT	NT	19	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	ND<50	ND<50	ND<50	130	ND<50	ND<50	ND<50
RSR Pesticides/Herbicides	NA	NA	NA	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.
- RSR = Remediation Standard Regulations.
- 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 AOC-12.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT
Sampling Date: February 8, 2002

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)						
	Residential	Industrial/ Commercial		TB-II	TB-II	TB-II	TB-II	TB-JJ	TB-JJ	TB-JJ
Depth Below Grade (ft.)			GB Area	(0-2)	(2-4)	(5-7)	(10-12)	(0-2)	(2-4)	(4-6)
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)										
Acenaphthene	1,000	2,500	84	ND<0.20	ND<0.20	ND<0.20	1.1	ND<0.20	0.48	0.21
Acenaphthylene	1,000	2,500	84	0.20	ND<0.20	ND<0.20	0.96	0.23	0.25	ND<0.20
Anthracene	1,000	2,500	400	0.39	ND<0.20	0.70	7.1	0.49	0.51	0.30
Benzo[a]anthracene	1	7.8	1	1.9	0.72	3.3	17	3.2	1.9	1.1
Benzo[b]fluoranthene	1	7.8	1	1.9	0.57	3.0	19	3.8	1.6	0.96
Benzo[g,h,i]perylene	1,000	2,500	42	1.7	ND<0.20	1.6	4.5	1.9	0.94	0.63
Benzo[k]fluoranthene	8.4	78	1	0.74	0.25	1.0	5.5	1.1	0.64	0.34
Benzo[a]pyrene	1	1	1	1.8	0.61	2.3	13	2.6	1.7	0.98
Chrysene	84	780	1	1.6	0.65	3.3	17	3.3	1.4	0.80
Dibenz[a,h]anthracene	1	1	1	0.27	ND<0.20	0.51	1.4	0.52	0.24	ND<0.20
Fluoranthene	1,000	2,500	56	4.4	1.0	8.3	94	8.5	5.5	2.2
Fluorene	1,000	2,500	56	ND<0.20	ND<0.20	0.32	1.1	ND<0.20	0.53	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	1.7	ND<0.20	1.9	6.0	2.2	1.2	0.71
Naphthalene	1,000	2,500	56	ND<0.20	ND<0.20	0.48	4.1	0.38	1.1	0.41
Phenanthrene	1,000	2,500	40	1.7	0.66	3.9	36	3.7	1.7	0.65
Pyrene	1,000	2,500	40	4.0	1.1	7.6	88	7.9	4.3	2.0
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	NA	NT	NT	ND<0.50	NT	NT	ND<0.50	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)										
Ethylbenzene	500	1,000	10.1	NT	NT	ND<0.005	NT	NT	ND<0.005	ND<0.005
Naphthalene	1,000	2,500	56	NT	NT	0.025	NT	NT	0.19	0.0061
n-Propylbenzene	500	1,000	14	NT	NT	ND<0.005	NT	NT	ND<0.005	ND<0.005
Toluene	500	1,000	67	NT	NT	ND<0.005	NT	NT	ND<0.005	ND<0.005
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	0.011	NT	NT	ND<0.005	ND<0.005
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	0.0068	NT	NT	ND<0.005	ND<0.005
Xylenes (total)	500	1,000	19.5	NT	NT	ND<0.005	NT	NT	ND<0.005	ND<0.005

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.1 Page 1 of 14


Table AOC-12.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT
Sampling Date: February 8, 2002

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)						
	Residential	Industrial/Commercial		TB-II	TB-II	TB-II	TB-II	TB-JJ	TB-JJ	TB-JJ
Depth Below Grade (ft.)			GB Area	(0-2)	(2-4)	(5-7)	(10-12)	(0-2)	(2-4)	(4-6)
SPLP Metals										
Arsenic	NA	NA	0.5	NT	ND<0.05	ND<0.05	NT	ND<0.05	NT	NT
Barium	NA	NA	10	NT	0.39	NT	NT	0.33	NT	NT
Zinc	NA	NA	50	NT	0.23	NT	NT	0.13	NT	NT
Total Metals										
Antimony	27	8,200	NA	NT	ND<2.0	NT	NT	ND<2.0	NT	NT
Arsenic	10	10	NA	3.9	2.3	48	15	53	ND<1.0	1.9
Barium	4,700	140,000	NA	NT	24	NT	NT	59	NT	NT
Cadmium	34	1,000	NA	NT	1.2	NT	NT	2.8	NT	NT
Chromium	100*	100*	NA	NT	12	NT	NT	14	NT	NT
Copper	2,500	76,000	NA	NT	54	NT	NT	71	NT	NT
Lead	500	1,000	NA	NT	24	NT	NT	84	NT	NT
Mercury	20	610	NA	NT	ND<0.20	NT	NT	4.8	NT	NT
Nickel	1,400	7,500	NA	NT	8.7	NT	NT	13	NT	NT
Selenium	340	10,000	NA	NT	ND<1.0	NT	NT	2.5	NT	NT
Thallium	5.4	160	NA	NT	5.1	8.0	NT	3.9	NT	NT
Vanadium	470	14,000	NA	NT	33	NT	NT	43	NT	NT
Zinc	20,000	610,000	NA	NT	42	NT	NT	67	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	220	150	250	420	230	100	120

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.

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.1 Page 2 of 14

Table AOC-12.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT
Sampling Date: February 8, 2002

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)						
	Residential	Industrial/ Commercial		TB-JJ (6-7)	TB-KK (0-2)	TB-KK (2-4)	TB-KK (4-6)	TB-KK (6-7)	TB-LL (0-2)	TB-LL (2-4)
Depth Below Grade (ft.)			GB Area							
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)										
Acenaphthene	1,000	2,500	84	NT	ND<0.20	0.63	ND<0.20	NT	ND<0.20	ND<0.20
Acenaphthylene	1,000	2,500	84	NT	ND<0.20	ND<0.20	ND<0.20	NT	ND<0.20	ND<0.20
Anthracene	1,000	2,500	400	NT	ND<0.20	1.8	ND<0.20	NT	ND<0.20	ND<0.20
Benzo[a]anthracene	1	7.8	1	NT	ND<0.20	4.7	0.25	NT	0.58	0.41
Benzo[b]fluoranthene	1	7.8	1	NT	0.24	5.0	0.20	NT	0.72	0.42
Benzo[g,h,i]perylene	1,000	2,500	42	NT	ND<0.20	2.8	0.23	NT	0.47	ND<0.20
Benzo[k]fluoranthene	8.4	78	1	NT	ND<0.20	1.8	ND<0.20	NT	0.28	ND<0.20
Benzo[a]pyrene	1	1	1	NT	ND<0.20	4.1	0.22	NT	0.57	0.35
Chrysene	84	780	1	NT	ND<0.20	4.0	0.21	NT	0.57	0.31
Dibenz[a,h]anthracene	1	1	1	NT	ND<0.20	0.61	ND<0.20	NT	ND<0.20	ND<0.20
Fluoranthene	1,000	2,500	56	NT	0.28	19	0.44	NT	1.0	0.61
Fluorene	1,000	2,500	56	NT	ND<0.20	0.70	ND<0.20	NT	ND<0.20	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	ND<0.20	2.9	ND<0.20	NT	0.48	ND<0.20
Naphthalene	1,000	2,500	56	NT	ND<0.20	0.34	ND<0.20	NT	ND<0.20	ND<0.20
Phenanthrene	1,000	2,500	40	NT	ND<0.20	9.7	0.29	NT	0.46	0.29
Pyrene	1,000	2,500	40	NT	0.25	16	0.40	NT	0.95	0.57
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	NA	NT	ND<0.50	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<0.005	NT
Naphthalene	1,000	2,500	56	NT	0.0078	NT	NT	NT	ND<0.005	NT
n-Propylbenzene	500	1,000	14	NT	ND<0.005	NT	NT	NT	ND<0.005	NT
Toluene	500	1,000	67	NT	ND<0.005	NT	NT	NT	ND<0.005	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	ND<0.005	NT	NT	NT	ND<0.005	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	ND<0.005	NT	NT	NT	ND<0.005	NT
Xylenes (total)	500	1,000	19.5	NT	ND<0.005	NT	NT	NT	ND<0.005	NT

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.1 Page 3 of 14

Table AOC-12.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT
Sampling Date: February 8, 2002

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)						
	Residential	Industrial/ Commercial		TB-JJ	TB-KK	TB-KK	TB-KK	TB-KK	TB-LL	TB-LL
Depth Below Grade (ft.)			GB Area	(6-7)	(0-2)	(2-4)	(4-6)	(6-7)	(0-2)	(2-4)
SPLP Metals										
Arsenic	NA	NA	0.5	NT	NT	ND<0.05	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	0.23	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	0.15	NT	NT	NT	NT
Total Metals										
Antimony	27	8,200	NA	NT	NT	3.2	NT	NT	NT	NT
Arsenic	10	10	NA	2.7	3.1	4.7	ND<1.0	3.5	4.8	2.0
Barium	4,700	140,000	NA	NT	NT	40	NT	NT	NT	NT
Cadmium	34	1,000	NA	NT	NT	2.8	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	17	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	120	NT	NT	NT	NT
Lead	500	1,000	NA	NT	NT	45	NT	NT	NT	NT
Mercury	20	610	NA	NT	NT	0.89	NT	NT	NT	NT
Nickel	1,400	7,500	NA	NT	NT	17	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	ND<1.0	NT	NT	NT	NT
Thallium	5.4	160	NA	NT	NT	12	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	34	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	70	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	110	110	ND<50	NT	220	61

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.

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.1 Page 4 of 14

Tab C-12.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT
Sampling Date: February 8, 2002

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-LL (5-7)	TB-LL (10-12)	TB-MM (0-2)	TB-MM (2-4)	TB-MM (5-7)	TB-MM (10-12)
Depth Below Grade (ft.)										
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)										
Acenaphthene	1,000	2,500	84	ND<0.20	0.31	ND<0.20	ND<1.0	ND<1.0	ND<0.20	ND<0.20
Acenaphthylene	1,000	2,500	84	ND<0.20	0.88	0.23	ND<1.0	ND<1.0	ND<0.20	ND<0.20
Anthracene	1,000	2,500	400	ND<0.20	1.0	ND<0.20	ND<1.0	ND<1.0	ND<0.20	ND<0.20
Benzo[a]anthracene	1	7.8	1	0.65	4.4	1.4	2.2	1.5	0.79	0.88
Benzo[b]fluoranthene	1	7.8	1	0.77	4.5	2.0	2.6	3.3	1.1	0.98
Benzo[g,h,i]perylene	1,000	2,500	42	ND<0.20	2.1	1.0	1.2	2.3	0.46	0.64
Benzo[k]fluoranthene	8.4	78	1	0.27	1.7	0.57	1.1	1.3	0.45	0.33
Benzo[a]pyrene	1	1	1	0.47	4.0	1.4	1.8	2.6	0.99	0.80
Chrysene	84	780	1	0.54	4.4	1.4	2.0	1.4	0.77	0.75
Dibenz[a,h]anthracene	1	1	1	ND<0.20	0.56	0.24	ND<1.0	ND<1.0	ND<0.20	ND<0.20
Fluoranthene	1,000	2,500	56	1.3	15	2.2	3.8	1.7	1.1	1.2
Fluorene	1,000	2,500	56	ND<0.20	0.38	ND<0.20	ND<1.0	ND<1.0	ND<0.20	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	ND<0.20	2.4	1.3	1.1	2.1	0.41	0.63
Naphthalene	1,000	2,500	56	ND<0.20	0.90	0.25	ND<1.0	ND<1.0	ND<0.20	ND<0.20
Phenanthrene	1,000	2,500	40	0.72	2.0	1.1	3.2	ND<1.0	0.64	0.55
Pyrene	1,000	2,500	40	1.2	20	2.3	3.3	1.6	1.4	1.3
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	NA	NT	NT	NT	ND<0.50	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)										
Ethylbenzene	500	1,000	10.1	NT	NT	NT	ND<0.005	NT	NT	ND<0.005
Naphthalene	1,000	2,500	56	NT	NT	NT	ND<0.005	NT	NT	ND<0.005
n-Propylbenzene	500	1,000	14	NT	NT	NT	ND<0.005	NT	NT	ND<0.005
Toluene	500	1,000	67	NT	NT	NT	ND<0.005	NT	NT	ND<0.005
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.005	NT	NT	ND<0.005
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	ND<0.005	NT	NT	ND<0.005
Xylenes (total)	500	1,000	19.5	NT	NT	NT	ND<0.005	NT	NT	ND<0.005

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.1 Page 5 of 14

Table AOC-12.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT
Sampling Date: February 8, 2002

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)						
	Residential	Industrial/Commercial		TB-LL (5-7)	TB-LL (10-12)	TB-MM (0-2)	TB-MM (2-4)	TB-MM (5-7)	TB-MM (10-12)	TB-NN (0-2)
Depth Below Grade (ft.)										
SPLP Metals										
Arsenic	NA	NA	0.5	NT	NT	ND<0.05	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	0.39	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	0.22	NT	NT	NT	NT
Total Metals										
Antimony	27	8,200	NA	NT	NT	ND<2.0	NT	NT	NT	NT
Arsenic	10	10	NA	3.6	8.5	25	1.3	2.1	1.6	3.6
Barium	4,700	140,000	NA	NT	NT	60	NT	NT	NT	NT
Cadmium	34	1,000	NA	NT	NT	1.8	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	11	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	69	NT	NT	NT	NT
Lead	500	1,000	NA	NT	NT	72	NT	NT	NT	NT
Mercury	20	610	NA	NT	NT	3.5	NT	NT	NT	NT
Nickel	1,400	7,500	NA	NT	NT	11	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	1.3	NT	NT	NT	NT
Thallium	5.4	160	NA	NT	NT	4.6	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	32	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	69	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	ND<50	500	73	360	280	610	220

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.

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.1 Page 6 of 14

Table AOC-12.1

Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT
Sampling Date: February 8, 2002

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)						
	Residential	Industrial/ Commercial		TB-NN (2-4)	TB-NN (4-6)	TB-NN (6-7)	TB-OO (0-2)	TB-OO (2-4)	TB-OO (6-7.3)	TB-PP (0-2)
Depth Below Grade (ft.)										
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)										
Acenaphthene	1,000	2,500	84	ND<0.20	NT	NT	1.0	ND<0.20	NT	ND<0.20
Acenaphthylene	1,000	2,500	84	ND<0.20	NT	NT	ND<0.20	ND<0.20	NT	ND<0.20
Anthracene	1,000	2,500	400	ND<0.20	NT	NT	2.7	ND<0.20	NT	ND<0.20
Benzo[a]anthracene	1	7.8	1	0.67	NT	NT	12	1.1	NT	ND<0.20
Benzo[b]fluoranthene	1	7.8	1	0.90	NT	NT	19	1.3	NT	0.25
Benzo[g,h,i]perylene	1,000	2,500	42	0.31	NT	NT	3.4	0.58	NT	ND<0.20
Benzo[k]fluoranthene	8.4	78	1	0.35	NT	NT	5.5	0.51	NT	ND<0.20
Benzo[a]pyrene	1	1	1	0.69	NT	NT	12	1.1	NT	ND<0.20
Chrysene	84	780	1	0.59	NT	NT	12	0.91	NT	ND<0.20
Dibenz[a,h]anthracene	1	1	1	ND<0.20	NT	NT	1.1	ND<0.20	NT	ND<0.20
Fluoranthene	1,000	2,500	56	1.1	NT	NT	37	1.7	NT	0.29
Fluorene	1,000	2,500	56	ND<0.20	NT	NT	0.88	ND<0.20	NT	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	0.39	NT	NT	4.2	0.48	NT	ND<0.20
Naphthalene	1,000	2,500	56	ND<0.20	NT	NT	0.32	ND<0.20	NT	ND<0.20
Phenanthrene	1,000	2,500	40	0.57	NT	NT	19	1.0	NT	ND<0.20
Pyrene	1,000	2,500	40	0.97	NT	NT	31	1.7	NT	0.26
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	NA	NT	NT	NT	NT	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)										
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT	ND<0.005	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT	ND<0.005	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT	ND<0.005	NT	NT
Toluene	500	1,000	67	NT	NT	NT	NT	ND<0.005	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	ND<0.005	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT	ND<0.005	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT	ND<0.005	NT	NT

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.1 Page 7 of 14

Table AOC-12.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT
Sampling Date: February 8, 2002

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-NN (2-4)	TB-NN (4-6)	TB-NN (6-7)	TB-OO (0-2)	TB-OO (2-4)	TB-OO (6-7.3)
Depth Below Grade (ft.)										
SPLP Metals										
Arsenic	NA	NA	0.5	NT	NT	NT	NT	NT	NT	NT
Barium	NA	NA	10	NT	NT	NT	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT	NT	NT	NT
Total Metals										
Antimony	27	8,200	NA	NT	NT	NT	NT	NT	NT	NT
Arsenic	10	10	NA	4.5	2.0	3.2	1.4	3.2	1.6	ND<1.0
Barium	4,700	140,000	NA	NT	NT	NT	NT	NT	NT	NT
Cadmium	34	1,000	NA	NT	NT	NT	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	NT	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	NT	NT	NT	NT	NT
Lead	500	1,000	NA	NT	NT	NT	NT	NT	NT	NT
Mercury	20	610	NA	NT	NT	NT	NT	NT	NT	NT
Nickel	1,400	7,500	NA	NT	NT	NT	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	NT	NT	NT	NT	NT
Thallium	5.4	160	NA	NT	NT	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	NT	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	70	65	NT	910	210	NT	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 Leachate Procedure.

Units are milligrams per liter (mg/L).

* = 100 mg/kg for hexavalent chromium.

☐ = Concentration exceeds associated criterion.

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.1 Page 8 of 14

Table AOC-12.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT
Sampling Date: February 8, 2002

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)						
	Residential	Industrial/ Commercial		TB-PP (2-4)	TB-PP (5-6.5)	TB-QQ (0-2)	TB-QQ (5-7)	TB-QQ (10-12)	TB-RR (0-2)	TB-RR (2-4)
Depth Below Grade (ft.)			GB Area							
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)										
Acenaphthene	1,000	2,500	84	0.65	NT	ND<1.00	NT	ND<1.0	ND<0.20	ND<1.0
Acenaphthylene	1,000	2,500	84	ND<0.20	NT	ND<1.00	NT	1.2	ND<0.20	1.2
Anthracene	1,000	2,500	400	1.5	NT	ND<1.00	NT	1.0	ND<0.20	ND<1.0
Benzo[a]anthracene	1	7.8	1	6.4	NT	ND<1.00	NT	3.6	0.64	1.7
Benzo[b]fluoranthene	1	7.8	1	7.9	NT	ND<1.00	NT	6.0	1.2	4.0
Benzo[g,h,i]perylene	1,000	2,500	42	3.9	NT	ND<1.00	NT	1.8	0.30	1.8
Benzo[k]fluoranthene	8.4	78	1	2.7	NT	ND<1.00	NT	2.5	0.51	1.4
Benzo[a]pyrene	1	1	1	6.5	NT	ND<1.00	NT	3.9	0.68	2.3
Chrysene	84	780	1	5.9	NT	ND<1.00	NT	3.4	0.62	1.5
Dibenz[a,h]anthracene	1	1	1	0.96	NT	ND<1.00	NT	ND<1.0	ND<0.20	ND<1.0
Fluoranthene	1,000	2,500	56	27	NT	ND<1.00	NT	7.5	1.0	1.5
Fluorene	1,000	2,500	56	0.51	NT	ND<1.00	NT	ND<1.0	ND<0.20	ND<1.0
Indeno[1,2,3-cd]pyrene	1	7.8	1	5.0	NT	ND<1.00	NT	1.9	0.37	1.3
Naphthalene	1,000	2,500	56	ND<0.20	NT	ND<1.00	NT	ND<1.0	ND<0.20	ND<1.0
Phenanthrene	1,000	2,500	40	11	NT	ND<1.00	NT	5.2	0.44	ND<1.0
Pyrene	1,000	2,500	40	25	NT	ND<1.00	NT	6.0	0.93	1.8
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	NA	NT	NT	ND<0.50	NT	ND<0.50	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)										
Ethylbenzene	500	1,000	10.1	ND<0.005	NT	NT	ND<0.005	0.0077	NT	NT
Naphthalene	1,000	2,500	56	0.039	NT	NT	0.073	0.043	NT	NT
n-Propylbenzene	500	1,000	14	ND<0.005	NT	NT	ND<0.005	0.0079	NT	NT
Toluene	500	1,000	67	ND<0.005	NT	NT	ND<0.005	0.0066	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	ND<0.005	NT	NT	ND<0.005	0.0064	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	ND<0.005	NT	NT	ND<0.005	0.015	NT	NT
Xylenes (total)	500	1,000	19.5	ND<0.005	NT	NT	ND<0.005	0.013	NT	NT

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.1 Page 9 of 14

Table AOC-12.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT
Sampling Date: February 8, 2002

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)						
	Residential	Industrial/ Commercial		TB-PP (2-4)	TB-PP (5-6.5)	TB-QQ (0-2)	TB-QQ (5-7)	TB-QQ (10-12)	TB-RR (0-2)	TB-RR (2-4)
Depth Below Grade (ft.)			GB Area							
SPLP Metals										
Arsenic	NA	NA	0.5	NT	NT	ND<0.05	NT	ND<0.05	NT	NT
Barium	NA	NA	10	NT	NT	0.37	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	0.23	NT	NT	NT	NT
Total Metals										
Antimony	27	8,200	NA	NT	NT	ND<2.0	NT	NT	NT	NT
Arsenic	10	10	NA	ND<1.0	ND<1.0	ND<1.0	1.3	83	4.7	1.9
Barium	4,700	140,000	NA	NT	NT	21	NT	NT	NT	NT
Cadmium	34	1,000	NA	NT	NT	1.2	NT	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	8.7	NT	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	57	NT	NT	NT	NT
Lead	500	1,000	NA	NT	NT	9.7	NT	NT	NT	NT
Mercury	20	610	NA	NT	NT	ND<0.20	NT	NT	NT	NT
Nickel	1,400	7,500	NA	NT	NT	11	NT	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	ND<1.0	NT	NT	NT	NT
Thallium	5.4	160	NA	NT	NT	5.8	NT	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	56	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	22	NT	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	230	NT	840	NT	520	100	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.

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.1 Page 10 of 14

Table C-12.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT
Sampling Date: February 8, 2002

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-SS (2-3)	TB-TT (1-3)	TB-UU (0-2)	TB-UU (2-4)	TB-UU (4-6)	TB-VV (0-2)
Depth Below Grade (ft.)										
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)										
Acenaphthene	1,000	2,500	84	ND<0.20	ND<1.0	ND<0.20	ND<1.0	NT	ND<0.20	ND<0.20
Acenaphthylene	1,000	2,500	84	ND<0.20	ND<1.0	ND<0.20	2.3	NT	ND<0.20	ND<0.20
Anthracene	1,000	2,500	400	ND<0.20	ND<1.0	0.34	3.0	NT	ND<0.20	ND<0.20
Benzo[a]anthracene	1	7.8	1	ND<0.20	ND<1.0	2.7	22	NT	0.36	0.40
Benzo[b]fluoranthene	1	7.8	1	ND<0.20	1.2	4.5	33	NT	0.56	0.62
Benzo[g,h,i]perylene	1,000	2,500	42	ND<0.20	ND<1.0	1.4	8.4	NT	ND<0.20	ND<0.20
Benzo[k]fluoranthene	8.4	78	1	ND<0.20	ND<1.0	1.58	15	NT	0.25	0.27
Benzo[a]pyrene	1	1	1	ND<0.20	1.1	3.3	24	NT	0.40	0.43
Chrysene	84	780	1	ND<0.20	ND<1.0	2.2	17	NT	0.32	0.39
Dibenz[a,h]anthracene	1	1	1	ND<0.20	ND<1.0	0.40	2.3	NT	ND<0.20	ND<0.20
Fluoranthene	1,000	2,500	56	ND<0.20	1.3	4.8	43	NT	0.60	0.67
Fluorene	1,000	2,500	56	ND<0.20	ND<1.0	ND<0.20	ND<1.0	NT	ND<0.20	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	ND<0.20	1.1	1.5	9.5	NT	0.20	ND<0.20
Naphthalene	1,000	2,500	56	ND<0.20	ND<1.0	ND<0.20	1.0	NT	ND<0.20	ND<0.20
Phenanthrene	1,000	2,500	40	ND<0.20	ND<1.0	1.5	19	NT	0.35	0.34
Pyrene	1,000	2,500	40	ND<0.20	1.2	4.2	43	NT	0.56	0.59
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	NA	NT	NT	NT	ND<0.50	NT	NT	ND<0.50
USEPA Method 8260 Volatile Organic Compounds (VOCs)										
Ethylbenzene	500	1,000	10.1	ND<0.005	NT	NT	ND<0.005	NT	NT	NT
Naphthalene	1,000	2,500	56	ND<0.005	NT	NT	0.11	NT	NT	NT
n-Propylbenzene	500	1,000	14	ND<0.005	NT	NT	ND<0.005	NT	NT	NT
Toluene	500	1,000	67	ND<0.005	NT	NT	ND<0.005	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	ND<0.005	NT	NT	ND<0.005	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	ND<0.005	NT	NT	ND<0.005	NT	NT	NT
Xylenes (total)	500	1,000	19.5	ND<0.005	NT	NT	ND<0.005	NT	NT	NT

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.1 Page 11 of 14

Table AOC-12.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT
Sampling Date: February 8, 2002

Analyte	Direct Exposure Criteria for Soil (mg/kg)		Pollutant Mobility Criteria for Soil (mg/kg)	Soil Sample Concentrations (ppm)						
	Residential	Industrial/ Commercial		TB-SS	TB-TT	TB-UU	TB-UU	TB-UU	TB-VV	TB-VV
Depth Below Grade (ft.)			GB Area	(2-3)	(1-3)	(0-2)	(2-4)	(4-6)	(0-2)	(2-4)
SPLP Metals										
Arsenic	NA	NA	0.5	ND<0.05	NT	NT	NT	NT	NT	ND<0.05
Barium	NA	NA	10	NT	NT	NT	NT	NT	NT	0.39
Zinc	NA	NA	50	NT	NT	NT	NT	NT	NT	0.27
Total Metals										
Antimony	27	8,200	NA	NT	NT	NT	NT	NT	NT	ND<2.0
Arsenic	10	10	NA	14	9.0	1.7	2.0	1.9	1.4	1.0
Barium	4,700	140,000	NA	NT	NT	NT	NT	NT	NT	31
Cadmium	34	1,000	NA	NT	NT	NT	NT	NT	NT	0.94
Chromium	100*	100*	NA	NT	NT	NT	NT	NT	NT	8.1
Copper	2,500	76,000	NA	NT	NT	NT	NT	NT	NT	26
Lead	500	1,000	NA	NT	NT	NT	NT	NT	NT	19
Mercury	20	610	NA	NT	NT	NT	NT	NT	NT	ND<0.20
Nickel	1,400	7,500	NA	NT	NT	NT	NT	NT	NT	8.6
Selenium	340	10,000	NA	NT	NT	NT	NT	NT	NT	ND<1.0
Thallium	5.4	160	NA	NT	NT	NT	NT	NT	NT	3.4
Vanadium	470	14,000	NA	NT	NT	NT	NT	NT	NT	28
Zinc	20,000	610,000	NA	NT	NT	NT	NT	NT	NT	32
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	85	160	170	1,200	1,100	NT	130

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.

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.1 Page 12 of 14

Table AOC-12.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT
Sampling Date: February 8, 2002

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-VV (4-6)	TB-WW (0-2)	TB-WW (2-4)	TB-WW (5-7)
Depth Below Grade (ft.)							
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)							
Acenaphthene	1,000	2,500	84	12	ND<0.20	ND<1.0	ND<0.20
Acenaphthylene	1,000	2,500	84	28	1.5	ND<1.0	ND<0.20
Anthracene	1,000	2,500	400	63	4.7	1.0	ND<0.20
Benzo[a]anthracene	1	7.8	1	64	9.5	3.6	ND<0.20
Benzo[b]fluoranthene	1	7.8	1	71	12	4.4	ND<0.20
Benzo[g,h,i]perylene	1,000	2,500	42	13	4.9	3.4	ND<0.20
Benzo[k]fluoranthene	8.4	78	1	26	3.7	1.8	ND<0.20
Benzo[a]pyrene	1	1	1	57	9.8	3.8	ND<0.20
Chrysene	84	780	1	58	8.9	2.8	ND<0.20
Dibenz[a,h]anthracene	1	1	1	4.5	0.96	ND<1.0	ND<0.20
Fluoranthene	1,000	2,500	56	220	38	7.4	ND<0.20
Fluorene	1,000	2,500	56	51	1.1	ND<1.0	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	15	5.6	3.2	ND<0.20
Naphthalene	1,000	2,500	56	1.7	0.62	ND<1.0	ND<0.20
Phenanthrene	1,000	2,500	40	360	32	4.7	ND<0.20
Pyrene	1,000	2,500	40	210	37	6.2	ND<0.20
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)	1	10	NA	ND<0.50	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)							
Ethylbenzene	500	1,000	10.1	NT	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	NT	NT
Toluene	500	1,000	67	NT	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	NT

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.1 Page 13 of 14

Tab C-12.1
Comparison of Test Boring Soil Sample Analyte Concentrations
to DEP Remediation Standard Regulations Numerical Criteria
QE/English Station, New Haven, CT
Sampling Date: February 8, 2002

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-VV (4-6)	TB-WW (0-2)	TB-WW (2-4)	TB-WW (5-7)
Depth Below Grade (ft.)							
SPLP Metals							
Arsenic	NA	NA	0.5	NT	NT	0.50	NT
Barium	NA	NA	10	NT	NT	NT	NT
Zinc	NA	NA	50	NT	NT	NT	NT
Total Metals							
Antimony	27	8,200	NA	NT	NT	ND<2.0	NT
Arsenic	10	10	NA	7.6	ND<1.0	22	3.1
Barium	4,700	140,000	NA	NT	NT	43	NT
Cadmium	34	1,000	NA	NT	NT	1.4	NT
Chromium	100*	100*	NA	NT	NT	12	NT
Copper	2,500	76,000	NA	NT	NT	100	NT
Lead	500	1,000	NA	NT	NT	37	NT
Mercury	20	610	NA	NT	NT	1.1	NT
Nickel	1,400	7,500	NA	NT	NT	12	NT
Selenium	340	10,000	NA	NT	NT	ND<1.0	NT
Thallium	5.4	160	NA	NT	NT	5.3	NT
Vanadium	470	14,000	NA	NT	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	62	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	820	150	150	160

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.

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.1 Page 14 of 14

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-JJ	TB-KK	TB-OO	TB-RR	TB-VV	TB-ZZ
Depth Below Grade (ft.)			GB Area	(2-4)	(2-4)	(0-2)	(2-4)	(5-5.5)	(26.5-27)
Sample Collection Date				4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002	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	ND<0.005	NT	ND<0.005	ND<0.005
Isopropylbenzene	500	1,000	132	NT	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005
4-Isopropyltoluene	500	1,000	41.8	NT	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005
Naphthalene	1,000	2,500	56	NT	ND<0.005	ND<0.005	NT	3.0	ND<0.005
n-Propylbenzene	500	1,000	14	NT	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005
Tetrachloroethene	12	110	1	NT	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005
Toluene	500	1,000	67	NT	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005
Trichloroethene	56	520	1.0	NT	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005
1,1,1-Trichloroethane	500	1,000	40	NT	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005
1,2,4-Trimethylbenzene	500	1,000	70	NT	ND<0.005	ND<0.005	NT	0.018	ND<0.005
1,3,5-Trimethylbenzene	500	1,000	70	NT	ND<0.005	ND<0.005	NT	0.014	ND<0.005
Xylenes (total)	500	1,000	19.5	NT	ND<0.005	ND<0.005	NT	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-JJ	TB-KK	TB-OO	TB-RR	TB-VV
Depth Below Grade (ft.)				(2-4)	(2-4)	(0-2)	(2-4)	(5-5.5)	(26.5-27)
Sample Collection Date				4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002	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	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	ND<5.0	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	0.32	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	0.30	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	ND<2.0	NT	NT	NT
Arsenic	10	10	NA	NT	NT	2.2	NT	NT	NT
Barium	4,700	140,000	NA	NT	NT	46	NT	NT	NT
Beryllium	2	2	NA	NT	NT	ND<1.0	NT	NT	NT
Cadmium	34	1,000	NA	NT	NT	1.1	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	8.7	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	43	NT	NT	NT
Lead	500	1,000	NA	NT	NT	28	NT	NT	NT
Mercury	20	610	NA	NT	NT	ND<0.20	NT	NT	NT
Nickel	1,400	7,500	NA	NT	NT	8.6	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	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-JJ	TB-KK	TB-OO	TB-RR	TB-VV	TB-ZZ
Depth Below Grade (ft.)				(2-4)	(2-4)	(0-2)	(2-4)	(5-5.5)	(26.5-27)
Sample Collection Date				4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/4/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	ND<2.0	NT	NT	NT
Thallium	5.4	160	NA	NT	NT	6.3	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	31	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	53	NT	NT	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	NT	NT	NT	NT	1,300

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-HHH	TB-HHH	TB-HHH	TB-HHH	TB-III
Depth Below Grade (ft.)					(0.0-0.3)	(1.3-2.3)	(2.3-4.3)	(4.3-6.3)	(0.0-0.3)
Sample Collection Date					4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	NT	ND<0.20	ND<0.20	NT	NT	ND<0.20
Acenaphthylene	1,000	2,500	84	NT	ND<0.20	ND<0.20	NT	NT	ND<0.20
Anthracene	1,000	2,500	400	NT	ND<0.20	ND<0.20	NT	NT	ND<0.20
Benzo[a]anthracene	1	7.8	1	NT	0.26	0.57	NT	NT	0.49
Benzo[a]pyrene	1	1	1	NT	0.32	0.65	NT	NT	0.49
Benzo[b]fluoranthene	1	7.8	1	NT	0.47	0.62	NT	NT	0.47
Benzo[g,h,i]perylene	1,000	2,500	42	NT	ND<0.20	1.2	NT	NT	0.75
Benzo[k]fluoranthene	8.4	78	1	NT	ND<0.20	0.23	NT	NT	ND<0.20
Chrysene	84	780	1	NT	0.30	0.55	NT	NT	0.49
Dibenz[a,h]anthracene	1	1	1	NT	ND<0.20	0.23	NT	NT	ND<0.20
Fluoranthene	1,000	2,500	56	NT	0.39	0.90	NT	NT	0.83
Fluorene	1,000	2,500	56	NT	ND<0.20	ND<0.20	NT	NT	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	NT	ND<0.20	0.99	NT	NT	0.82
Naphthalene	1,000	2,500	56	NT	ND<0.20	ND<0.20	NT	NT	ND<0.20
Phenanthrene	1,000	2,500	40	NT	0.21	0.39	NT	NT	0.60
Pyrene	1,000	2,500	40	NT	0.39	0.84	NT	NT	0.68
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	ND<0.005	ND<0.005	ND<0.005	NT	NT	ND<0.005
Isopropylbenzene	500	1,000	132	ND<0.005	ND<0.005	ND<0.005	NT	NT	ND<0.005
4-Isopropyltoluene	500	1,000	41.8	ND<0.005	ND<0.005	ND<0.005	NT	NT	ND<0.005
Naphthalene	1,000	2,500	56	ND<0.005	ND<0.005	ND<0.005	NT	NT	ND<0.005
n-Propylbenzene	500	1,000	14	ND<0.005	ND<0.005	ND<0.005	NT	NT	ND<0.005
Tetrachloroethene	12	110	1	ND<0.005	ND<0.005	ND<0.005	NT	NT	ND<0.005
Toluene	500	1,000	67	ND<0.005	ND<0.005	ND<0.005	NT	NT	ND<0.005
Trichloroethene	56	520	1.0	ND<0.005	ND<0.005	ND<0.005	NT	NT	ND<0.005
1,1,1-Trichloroethane	500	1,000	40	ND<0.005	0.032	ND<0.005	NT	NT	0.046
1,2,4-Trimethylbenzene	500	1,000	70	ND<0.005	ND<0.005	ND<0.005	NT	NT	ND<0.005
1,3,5-Trimethylbenzene	500	1,000	70	ND<0.005	ND<0.005	ND<0.005	NT	NT	ND<0.005
Xylenes (total)	500	1,000	19.5	ND<0.005	ND<0.005	ND<0.005	NT	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-HHH	TB-HHH	TB-HHH	TB-HHH	TB-III
Depth Below Grade (ft.)					(0.0-0.3)	(1.3-2.3)	(2.3-4.3)	(4.3-6.3)	(0.0-0.3)
Sample Collection Date					4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1248	1	10	NA	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1254	1	10	NA	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
PCB-1260	1	10	NA	NA	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Cyanide (total)	1,400	41,000	NA	NA	NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06	0.06	NT	ND<0.006	NT	NT	0.010
Arsenic	NA	NA	0.5	0.5	NT	ND<0.05	NT	NT	ND<0.05
Barium	NA	NA	10	10	NT	0.17	NT	NT	0.52
Copper	NA	NA	13	13	NT	ND<0.04	NT	NT	0.062
Lead	NA	NA	0.15	0.15	NT	ND<0.013	NT	NT	0.068
Mercury	NA	NA	0.02	0.02	NT	ND<0.002	NT	NT	ND<0.002
Nickel	NA	NA	1.0	1.0	NT	ND<0.05	NT	NT	ND<0.05
Selenium	NA	NA	0.50	0.50	NT	ND<0.01	NT	NT	ND<0.01
Thallium	NA	NA	0.05	0.05	NT	ND<0.005	NT	NT	0.005
Vanadium	NA	NA	0.50	0.50	NT	ND<0.05	NT	NT	ND<0.05
Zinc	NA	NA	50	50	NT	0.14	NT	NT	0.36
Total Metals									
Antimony	27	8,200	NA	NA	NT	ND<2.0	NT	NT	2.2
Arsenic	10	10	NA	NA	NT	7.8	NT	NT	70
Barium	4,700	140,000	NA	NA	NT	35	NT	NT	46
Beryllium	2	2	NA	NA	NT	ND<1.0	NT	NT	ND<1.0
Cadmium	34	1,000	NA	NA	NT	1.1	NT	NT	2.5
Chromium	100*	100*	NA	NA	NT	6.7	NT	NT	6.3
Copper	2,500	76,000	NA	NA	NT	45	NT	NT	220
Lead	500	1,000	NA	NA	NT	38	NT	NT	140
Mercury	20	610	NA	NA	NT	ND<0.20	NT	NT	2.4
Nickel	1,400	7,500	NA	NA	NT	13	NT	NT	11
Selenium	340	10,000	NA	NA	NT	ND<1.0	NT	NT	2.5

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-HHH	TB-HHH	TB-HHH	TB-HHH	TB-III
Depth Below Grade (ft.)				(0.0-0.3)	(1.3-2.3)	(2.3-4.3)	(4.3-6.3)	(0.0-0.3)	(1-3)
Sample Collection Date				4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
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	6.6	NT	NT	NT	14
Vanadium	470	14,000	NA	NT	18	NT	NT	NT	17
Zinc	20,000	610,000	NA	NT	40	NT	NT	NT	220
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	NT	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.

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		TB-III	TB-III	TB-III	TB-III	TB-JJJ	TB-JJJ
Depth Below Grade (ft.)			GB Area	(3.5-4.5)	(5-7)	(10-12)	(20-22)	(0.0-0.3)	(1-3)
Sample Collection Date				4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	ND<0.20	NT	ND<0.20	ND<0.20	NT	NT
Acenaphthylene	1,000	2,500	84	ND<0.20	NT	ND<0.20	ND<0.20	NT	NT
Anthracene	1,000	2,500	400	ND<0.20	NT	ND<0.20	ND<0.20	NT	NT
Benzo[a]anthracene	1	7.8	1	0.37	NT	0.90	ND<0.20	NT	NT
Benzo[a]pyrene	1	1	1	0.45	NT	0.90	ND<0.20	NT	NT
Benzo[b]fluoranthene	1	7.8	1	0.30	NT	0.72	ND<0.20	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	0.85	NT	1.2	ND<0.20	NT	NT
Benzo[k]fluoranthene	8.4	78	1	ND<0.20	NT	ND<0.20	ND<0.20	NT	NT
Chrysene	84	780	1	0.35	NT	0.68	ND<0.20	NT	NT
Dibenz[a,h]anthracene	1	1	1	ND<0.20	NT	0.23	ND<0.20	NT	NT
Fluoranthene	1,000	2,500	56	0.59	NT	1.6	ND<0.20	NT	NT
Fluorene	1,000	2,500	56	ND<0.20	NT	ND<0.20	ND<0.20	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1	0.67	NT	1.2	ND<0.20	NT	NT
Naphthalene	1,000	2,500	56	ND<0.20	NT	ND<0.20	ND<0.20	NT	NT
Phenanthrene	1,000	2,500	40	0.29	NT	0.47	ND<0.20	NT	NT
Pyrene	1,000	2,500	40	0.55	NT	1.4	ND<0.20	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	ND<0.005	ND<0.005	NT	0.056	ND<0.005
Isopropylbenzene	500	1,000	132	NT	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005
4-Isopropyltoluene	500	1,000	41.8	NT	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005
Naphthalene	1,000	2,500	56	NT	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005
n-Propylbenzene	500	1,000	14	NT	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005
Tetrachloroethene	12	110	1	NT	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005
Toluene	500	1,000	67	NT	ND<0.005	ND<0.005	NT	0.082	ND<0.005
Trichloroethene	56	520	1.0	NT	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005
1,1,1-Trichloroethane	500	1,000	40	NT	ND<0.005	ND<0.005	NT	ND<0.005	0.018
1,2,4-Trimethylbenzene	500	1,000	70	NT	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005
1,3,5-Trimethylbenzene	500	1,000	70	NT	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005
Xylenes (total)	500	1,000	19.5	NT	ND<0.005	ND<0.005	NT	0.337	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-III	TB-III	TB-III	TB-III	TB-JJJ
Depth Below Grade (ft.)					(3.5-4.5)	(5-7)	(10-12)	(20-22)	(0.0-0.3)
Sample Collection Date					4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA		ND<0.50	ND<0.50	ND<0.50	NT	ND<0.50
PCB-1248	1	10	NA		ND<0.50	ND<0.50	ND<0.50	NT	ND<0.50
PCB-1254	1	10	NA		ND<0.50	ND<0.50	ND<0.50	NT	ND<0.50
PCB-1260	1	10	NA		ND<0.50	ND<0.50	ND<0.50	NT	ND<0.50
Cyanide (total)	1,400	41,000	NA		NT	NT	NT	NT	NT
SPLP Metals									
Antimony	NA	NA	0.06		ND<0.006	NT	NT	NT	NT
Arsenic	NA	NA	0.5		ND<0.05	NT	NT	NT	NT
Barium	NA	NA	10		0.39	NT	NT	NT	NT
Copper	NA	NA	13		ND<0.04	NT	NT	NT	NT
Lead	NA	NA	0.15		ND<0.013	NT	NT	NT	NT
Mercury	NA	NA	0.02		ND<0.002	NT	NT	NT	NT
Nickel	NA	NA	1.0		ND<0.05	NT	NT	NT	NT
Selenium	NA	NA	0.50		ND<0.01	NT	NT	NT	NT
Thallium	NA	NA	0.05		ND<0.005	NT	NT	NT	NT
Vanadium	NA	NA	0.50		ND<0.05	NT	NT	NT	NT
Zinc	NA	NA	50		0.18	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA		3.2	NT	NT	NT	NT
Arsenic	10	10	NA		35	NT	NT	NT	NT
Barium	4,700	140,000	NA		34	NT	NT	NT	NT
Beryllium	2	2	NA		ND<1.0	NT	NT	NT	NT
Cadmium	34	1,000	NA		1.9	NT	NT	NT	NT
Chromium	100*	100*	NA		5.0	NT	NT	NT	NT
Copper	2,500	76,000	NA		65	NT	NT	NT	NT
Lead	500	1,000	NA		320	NT	NT	NT	NT
Mercury	20	610	NA		0.57	NT	NT	NT	NT
Nickel	1,400	7,500	NA		5.6	NT	NT	NT	NT
Selenium	340	10,000	NA		ND<1.0	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-III	TB-III	TB-III	TB-III	TB-JJJ	TB-JJJ
Depth Below Grade (ft.)			GB Area	(3.5-4.5)	(5-7)	(10-12)	(20-22)	(0.0-0.3)	(1-3)
Sample Collection Date				4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	ND<2.0	NT	NT	NT	NT	NT
Thallium	5.4	160	NA	12	NT	NT	NT	NT	NT
Vanadium	470	14,000	NA	13	NT	NT	NT	NT	NT
Zinc	20,000	610,000	NA	50	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 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-JJJ	TB-KKK	TB-KKK	TB-KKK	TB-KKK
Depth Below Grade (ft.)				(5-7)	(0.0-0.3)	(1-3)	(3-5)	(5-7)	(0.0-0.3)
Sample Collection Date				4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
USEPA Method 8270 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	ND<0.20	NT	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	ND<0.20	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	0.22	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	ND<0.20	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	ND<0.20	NT	NT	NT
Chrysene	84	780	1	NT	NT	0.34	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	ND<0.20	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	ND<0.20	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	0.20	NT	NT	NT
Pyrene	1,000	2,500	40	NT	NT	ND<0.20	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	ND<0.005	ND<0.25	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	ND<0.005	ND<0.25	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	ND<0.005	ND<0.25	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	ND<0.005	ND<0.25	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	ND<0.005	ND<0.25	NT	NT	NT
Tetrachloroethene	12	110	1	NT	ND<0.005	ND<0.25	NT	NT	NT
Toluene	500	1,000	67	NT	ND<0.005	ND<0.25	NT	NT	NT
Trichloroethene	56	520	1.0	NT	ND<0.005	ND<0.25	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	ND<0.005	ND<0.25	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	ND<0.005	ND<0.25	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	ND<0.005	ND<0.25	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	ND<0.005	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-JJJ	TB-KKK	TB-KKK	TB-KKK	TB-KKK	TB-LLL
Depth Below Grade (ft.)			GB Area	(5-7)	(0.0-0.3)	(1-3)	(3-5)	(5-7)	(0.0-0.3)
Sample Collection Date				4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
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	0.13	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	0.12	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	ND<2.0	NT	NT	NT
Arsenic	10	10	NA	NT	NT	14	NT	NT	NT
Barium	4,700	140,000	NA	NT	NT	30	NT	NT	NT
Beryllium	2	2	NA	NT	NT	ND<1.0	NT	NT	NT
Cadmium	34	1,000	NA	NT	NT	2.2	NT	NT	NT
Chromium	100*	100*	NA	NT	NT	5.6	NT	NT	NT
Copper	2,500	76,000	NA	NT	NT	25	NT	NT	NT
Lead	500	1,000	NA	NT	NT	18	NT	NT	NT
Mercury	20	610	NA	NT	NT	ND<0.20	NT	NT	NT
Nickel	1,400	7,500	NA	NT	NT	16	NT	NT	NT
Selenium	340	10,000	NA	NT	NT	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		TB-JJJ	TB-KKK	TB-KKK	TB-KKK	TB-KKK	TB-LLL
Depth Below Grade (ft.)			GB Area	(5-7)	(0.0-0.3)	(1-3)	(3-5)	(5-7)	(0.0-0.3)
Sample Collection Date				4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	ND<2.0	NT	NT	NT
Thallium	5.4	160	NA	NT	NT	12	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	15	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	12	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 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-LLL (1-3) 4/1/2002	TB-LLL (5-7) 4/1/2002	TB-MMM (0.0-0.3) 4/1/2002	TB-MMM (0.3-1.3) 4/1/2002	TB-MMM (2-4) 4/1/2002
Depth Below Grade (ft.)									
Sample Collection Date									
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	0.30	NT	NT	ND<0.20	ND<0.20	NT
Benzo[a]pyrene	1	1	1	ND<0.20	NT	NT	ND<0.20	ND<0.20	NT
Benzo[b]fluoranthene	1	7.8	1	0.20	NT	NT	ND<0.20	ND<0.20	NT
Benzo[g,h,i]perylene	1,000	2,500	42	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	ND<0.20	NT
Chrysene	84	780	1	0.37	NT	NT	ND<0.20	ND<0.20	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	0.26	NT	NT	ND<0.20	ND<0.20	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	ND<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	0.34	NT	NT	ND<0.20	ND<0.20	NT
Pyrene	1,000	2,500	40	0.21	NT	NT	ND<0.20	ND<0.20	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	ND<0.25	NT	NT	ND<0.005	ND<0.25	NT
Isopropylbenzene	500	1,000	132	ND<0.25	NT	NT	ND<0.005	ND<0.25	NT
4-Isopropyltoluene	500	1,000	41.8	ND<0.25	NT	NT	ND<0.005	ND<0.25	NT
Naphthalene	1,000	2,500	56	ND<0.25	NT	NT	ND<0.005	ND<0.25	NT
n-Propylbenzene	500	1,000	14	ND<0.25	NT	NT	ND<0.005	ND<0.25	NT
Tetrachloroethene	12	110	1	ND<0.25	NT	NT	ND<0.005	ND<0.25	NT
Toluene	500	1,000	67	ND<0.25	NT	NT	ND<0.005	ND<0.25	NT
Trichloroethene	56	520	1.0	ND<0.25	NT	NT	ND<0.005	ND<0.25	NT
1,1,1-Trichloroethane	500	1,000	40	ND<0.25	NT	NT	ND<0.005	ND<0.25	NT
1,2,4-Trimethylbenzene	500	1,000	70	ND<0.25	NT	NT	ND<0.005	ND<0.25	NT
1,3,5-Trimethylbenzene	500	1,000	70	ND<0.25	NT	NT	ND<0.005	ND<0.25	NT
Xylenes (total)	500	1,000	19.5	ND<0.25	NT	NT	ND<0.005	ND<0.25	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-LLL (1-3)	TB-LLL (5-7)	TB-MMM (0.0-0.3)	TB-MMM (0.3-1.3)	TB-MMM (2-4)
Depth Below Grade (ft.)				4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
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	ND<0.006	ND<0.006	NT
Arsenic	NA	NA	0.5	ND<0.05	NT	NT	ND<0.05	ND<0.05	NT
Barium	NA	NA	10	0.52	NT	NT	0.16	0.19	NT
Copper	NA	NA	13	ND<0.04	NT	NT	ND<0.04	ND<0.04	NT
Lead	NA	NA	0.15	0.019	NT	NT	ND<0.013	ND<0.013	NT
Mercury	NA	NA	0.02	ND<0.002	NT	NT	ND<0.002	ND<0.002	NT
Nickel	NA	NA	1.0	ND<0.05	NT	NT	ND<0.05	0.16	NT
Selenium	NA	NA	0.50	ND<0.01	NT	NT	ND<0.01	ND<0.01	NT
Thallium	NA	NA	0.05	ND<0.005	NT	NT	ND<0.005	ND<0.005	NT
Vanadium	NA	NA	0.50	ND<0.05	NT	NT	ND<0.05	ND<0.05	NT
Zinc	NA	NA	50	0.21	NT	NT	0.12	0.29	NT
Total Metals									
Antimony	27	8,200	NA	ND<2.0	NT	NT	ND<2.0	ND<2.0	NT
Arsenic	10	10	NA	14	NT	NT	ND<1.0	9.4	NT
Barium	4,700	140,000	NA	40	NT	NT	25	24	NT
Beryllium	2	2	NA	ND<1.0	NT	NT	ND<1.0	ND<1.0	NT
Cadmium	34	1,000	NA	1.9	NT	NT	1.3	3.2	NT
Chromium	100*	100*	NA	11	NT	NT	8.2	5.9	NT
Copper	2,500	76,000	NA	45	NT	NT	48	27	NT
Lead	500	1,000	NA	31	NT	NT	5.7	24	NT
Mercury	20	610	NA	0.22	NT	NT	ND<0.20	ND<0.20	NT
Nickel	1,400	7,500	NA	13	NT	NT	11	17	NT
Selenium	340	10,000	NA	ND<1.0	NT	NT	ND<1.0	ND<1.0	NT

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.2 Page 14 of 117

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-LLL	TB-LLL	TB-MMM	TB-MMM	TB-MMM	TB-NNN
Depth Below Grade (ft.)				(1-3)	(5-7)	(0.0-0.3)	(0.3-1.3)	(2-4)	(0.0-0.3)
Sample Collection Date				4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	ND<2.0	NT	NT	ND<2.0	ND<2.0	NT
Thallium	5.4	160	NA	9.1	NT	NT	7.9	17	NT
Vanadium	470	14,000	NA	23	NT	NT	52	12	NT
Zinc	20,000	610,000	NA	34	NT	NT	24	15	NT
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	ND<50	NT	NT	1,100	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-NNN	TB-NNN	TB-NNN	TB-OOO	TB-OOO
Depth Below Grade (ft.)					(0.3-2.3)	(2.3-4.3)	(4.3-6.3)	(0.0-0.3)	(0.3-1.3)
Sample Collection Date					4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84	ND<0.20	ND<0.20	NT	NT	NT	0.69
Acenaphthylene	1,000	2,500	84	ND<0.20	ND<0.20	NT	NT	NT	0.30
Anthracene	1,000	2,500	400	ND<0.20	ND<0.20	NT	NT	NT	6.8
Benzo[a]anthracene	1	7.8	1	ND<0.20	ND<0.20	NT	NT	NT	34
Benzo[a]pyrene	1	1	1	ND<0.20	ND<0.20	NT	NT	NT	6.0
Benzo[b]fluoranthene	1	7.8	1	ND<0.20	ND<0.20	NT	NT	NT	45
Benzo[g,h,i]perylene	1,000	2,500	42	ND<0.20	ND<0.20	NT	NT	NT	20
Benzo[k]fluoranthene	8.4	78	1	ND<0.20	ND<0.20	NT	NT	NT	6.0
Chrysene	84	780	1	ND<0.20	ND<0.20	NT	NT	NT	42
Dibenz[a,h]anthracene	1	1	1	ND<0.20	ND<0.20	NT	NT	NT	7.8
Fluoranthene	1,000	2,500	56	ND<0.20	ND<0.20	NT	NT	NT	2.8
Fluorene	1,000	2,500	56	ND<0.20	ND<0.20	NT	NT	NT	0.60
Indeno[1,2,3-cd]pyrene	1	7.8	1	ND<0.20	ND<0.20	NT	NT	NT	25
Naphthalene	1,000	2,500	56	ND<0.20	ND<0.20	NT	NT	NT	0.51
Phenanthrene	1,000	2,500	40	ND<0.20	ND<0.20	NT	NT	NT	4.7
Pyrene	1,000	2,500	40	ND<0.20	ND<0.20	NT	NT	NT	1.8
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	ND<0.005	ND<0.005	NT	0.019	ND<0.005	ND<0.25
Isopropylbenzene	500	1,000	132	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005	ND<0.25
4-Isopropyltoluene	500	1,000	41.8	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005	ND<0.25
Naphthalene	1,000	2,500	56	ND<0.005	ND<0.005	NT	0.016	ND<0.005	ND<0.25
n-Propylbenzene	500	1,000	14	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005	ND<0.25
Tetrachloroethene	12	110	1	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005	ND<0.25
Toluene	500	1,000	67	ND<0.005	ND<0.005	NT	0.044	ND<0.005	ND<0.25
Trichloroethene	56	520	1.0	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005	ND<0.25
1,1,1-Trichloroethane	500	1,000	40	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005	ND<0.25
1,2,4-Trimethylbenzene	500	1,000	70	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005	ND<0.25
1,3,5-Trimethylbenzene	500	1,000	70	ND<0.005	ND<0.005	NT	ND<0.005	ND<0.005	ND<0.25
Xylenes (total)	500	1,000	19.5	ND<0.005	ND<0.005	NT	0.118	ND<0.005	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		TB-NNN	TB-NNN	TB-NNN	TB-OOO	TB-OOO	TB-OOO
Depth Below Grade (ft.)			GB Area	(0.3-2.3)	(2.3-4.3)	(4.3-6.3)	(0.0-0.3)	(0.3-1.3)	(3-3.5)
Sample Collection Date				4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
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	ND<0.006	NT	NT	NT	0.009
Arsenic	NA	NA	0.5	ND<0.05	ND<0.05	NT	NT	NT	ND<0.05
Barium	NA	NA	10	0.32	0.38	NT	NT	NT	0.41
Copper	NA	NA	13	ND<0.04	ND<0.04	NT	NT	NT	ND<0.04
Lead	NA	NA	0.15	ND<0.013	ND<0.013	NT	NT	NT	0.032
Mercury	NA	NA	0.02	ND<0.002	ND<0.002	NT	NT	NT	ND<0.002
Nickel	NA	NA	1.0	ND<0.05	ND<0.05	NT	NT	NT	ND<0.05
Selenium	NA	NA	0.50	ND<0.01	ND<0.01	NT	NT	NT	ND<0.01
Thallium	NA	NA	0.05	ND<0.005	ND<0.005	NT	NT	NT	ND<0.005
Vanadium	NA	NA	0.50	ND<0.05	ND<0.05	NT	NT	NT	ND<0.05
Zinc	NA	NA	50	0.32	0.30	NT	NT	NT	0.20
Total Metals									
Antimony	27	8,200	NA	ND<2.0	11	NT	NT	NT	ND<2.0
Arsenic	10	10	NA	ND<1.0	2.3	NT	NT	NT	60
Barium	4,700	140,000	NA	51	230	NT	NT	NT	120
Beryllium	2	2	NA	ND<1.0	7.4	NT	NT	NT	ND<1.0
Cadmium	34	1,000	NA	1.0	5.4	NT	NT	NT	2.9
Chromium	100*	100*	NA	9.6	120 ⁽³⁾	NT	NT	NT	13
Copper	2,500	76,000	NA	15	1,400	NT	NT	NT	110
Lead	500	1,000	NA	9.9	1,000	NT	NT	NT	320
Mercury	20	610	NA	ND<0.20	ND<0.20	NT	NT	NT	1.8
Nickel	1,400	7,500	NA	7.5	500	NT	NT	NT	14
Selenium	340	10,000	NA	ND<1.0	1.4	NT	NT	NT	1.9

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.2 Page 17 of 117

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-NNN	TB-NNN	TB-NNN	TB-000	TB-000	TB-000
Depth Below Grade (ft.)			GB Area	(0.3-2.3)	(2.3-4.3)	(4.3-6.3)	(0.0-0.3)	(0.3-1.3)	(3-3.5)
Sample Collection Date				4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	ND<2.0	ND<2.0	NT	NT	NT	ND<2.0
Thallium	5.4	160	NA	5.9	29	NT	NT	NT	8.8
Vanadium	470	14,000	NA	22	25	NT	NT	NT	15
Zinc	20,000	610,000	NA	20	2,700	NT	NT	NT	170
Connecticut Extractable Total Petroleum Hydrocarbons (CTETPH)	500	2,500	2,500	ND<50	ND<50	NT	NT	NT	510

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-000	TB-PPP	TB-PPP	TB-PPP	TB-PPP	TB-PPP
Depth Below Grade (ft.)			GB Area	(4-6)	(0-0.3)	(0.3-2.3)	(2.5-3)	(3.5-4)	(4.3-6.3)
Sample Collection Date				4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
USEPA Method 8270 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	0.25	NT	NT	NT
Anthracene	1,000	2,500	400	NT	NT	0.23	NT	NT	NT
Benzo[a]anthracene	1	7.8	1	NT	NT	2.0	NT	NT	NT
Benzo[a]pyrene	1	1	1	NT	NT	2.8	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1	NT	NT	3.2	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	2.5	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1	NT	NT	1.2	NT	NT	NT
Chrysene	84	780	1	NT	NT	1.8	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1	NT	NT	0.50	NT	NT	NT
Fluoranthene	1,000	2,500	56	NT	NT	3.0	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	2.8	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	2.9	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1	NT	NT	ND<0.25	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	ND<0.25	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	ND<0.25	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	ND<0.25	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	ND<0.25	NT	NT	NT
Tetrachloroethene	12	110	1	NT	NT	ND<0.25	NT	NT	NT
Toluene	500	1,000	67	NT	NT	ND<0.25	NT	NT	NT
Trichloroethene	56	520	1.0	NT	NT	ND<0.25	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	ND<0.25	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.25	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.25	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	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		GB Area	TB-000	TB-PPP	TB-PPP	TB-PPP	TB-PPP
Depth Below Grade (ft.)					(4-6)	(0-0.3)	(0.3-2.3)	(2.5-3)	(3.5-4)
Sample Collection Date					4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
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	NT	NT
Arsenic	NA	NA	0.5		NT	NT	ND<0.05	NT	NT
Barium	NA	NA	10		NT	NT	0.25	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
Mercury	NA	NA	0.02		NT	NT	ND<0.002	NT	NT
Nickel	NA	NA	1.0		NT	NT	ND<0.05	NT	NT
Selenium	NA	NA	0.50		NT	NT	ND<0.01	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	0.27	NT	NT
Total Metals									
Antimony	27	8,200	NA		NT	NT	ND<2.0	NT	NT
Arsenic	10	10	NA		NT	NT	6.8	NT	NT
Barium	4,700	140,000	NA		NT	NT	76	NT	NT
Beryllium	2	2	NA		NT	NT	ND<1.0	NT	NT
Cadmium	34	1,000	NA		NT	NT	1.4	NT	NT
Chromium	100*	100*	NA		NT	NT	16	NT	NT
Copper	2,500	76,000	NA		NT	NT	55	NT	NT
Lead	500	1,000	NA		NT	NT	51	NT	NT
Mercury	20	610	NA		NT	NT	0.23	NT	NT
Nickel	1,400	7,500	NA		NT	NT	12	NT	NT
Selenium	340	10,000	NA		NT	NT	ND<1.0	NT	NT

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

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-000	TB-PPP	TB-PPP	TB-PPP	TB-PPP	TB-PPP
Depth Below Grade (ft.)			GB Area	(4-6)	(0-0.3)	(0.3-2.3)	(2.5-3)	(3.5-4)	(4.3-6.3)
Sample Collection Date				4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/1/2002
Total Metals (Cont'd)									
Silver	340	10,000	NA	NT	NT	ND<2.0	NT	NT	NT
Thallium	5.4	160	NA	NT	NT	7.9	NT	NT	NT
Vanadium	470	14,000	NA	NT	NT	41	NT	NT	NT
Zinc	20,000	610,000	NA	NT	NT	68	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 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-QQQ	TB-QQQ	TB-QQQ	TB-QQQ	TB-RRR
Depth Below Grade (ft.)					(0-0.3)	(0.3-2.3)	(2.3-4.3)	(4.3-5)	(0.0-0.3)
Sample Collection Date					4/1/2002	4/1/2002	4/1/2002	4/1/2002	4/2/2002
USEPA Method 8270 Polynuclear Aromatic Hydrocarbons (PAHs)									
Acenaphthene	1,000	2,500	84		NT	NT	NT	NT	NT
Acenaphthylene	1,000	2,500	84		NT	NT	NT	NT	NT
Anthracene	1,000	2,500	400		NT	NT	NT	NT	NT
Benzo[a]anthracene	1	7.8	1		NT	NT	NT	NT	NT
Benzo[a]pyrene	1	1	1		NT	NT	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1		NT	NT	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42		NT	NT	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1		NT	NT	NT	NT	NT
Chrysene	84	780	1		NT	NT	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1		NT	NT	NT	NT	NT
Fluoranthene	1,000	2,500	56		NT	NT	NT	NT	NT
Fluorene	1,000	2,500	56		NT	NT	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1		NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56		NT	NT	NT	NT	NT
Phenanthrene	1,000	2,500	40		NT	NT	NT	NT	NT
Pyrene	1,000	2,500	40		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
Isopropylbenzene	500	1,000	132		NT	ND<0.25	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8		NT	ND<0.25	NT	NT	NT
Naphthalene	1,000	2,500	56		NT	ND<0.25	NT	NT	NT
n-Propylbenzene	500	1,000	14		NT	ND<0.25	NT	NT	NT
Tetrachloroethene	12	110	1		NT	ND<0.25	NT	NT	NT
Toluene	500	1,000	67		NT	ND<0.25	NT	NT	NT
Trichloroethene	56	520	1.0		NT	ND<0.25	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40		NT	ND<0.25	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70		NT	ND<0.25	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70		NT	ND<0.25	NT	NT	NT
Xylenes (total)	500	1,000	19.5		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		GB Area	TB-QQQ	TB-QQQ	TB-QQQ	TB-QQQ	TB-RRR
Depth Below Grade (ft.)					(0-0.3)	(0.3-2.3)	(2.3-4.3)	(4.3-5)	(0.0-0.3)
Sample Collection Date					4/1/2002	4/1/2002	4/1/2002	4/1/2002	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
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

Ta-OC-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-QQQ (0-0.3) 4/1/2002	TB-QQQ (0.3-2.3) 4/1/2002	TB-QQQ (2.3-4.3) 4/1/2002	TB-QQQ (4.3-5) 4/1/2002	TB-RRR (0.0-0.3) 4/2/2002	TB-RRR (0.3-0.6) 4/2/2002
Depth Below Grade (ft.)									
Sample Collection Date									
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-RRR	TB-RRR	TB-SSS	TB-SSS	TB-SSS
Depth Below Grade (ft.)					(0.6-2.6)	(4.6-6.6)	(0.0-0.3)	(0.3-0.6)	(2.6-4.6)
Sample Collection Date					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		NT	NT	NT	NT	NT
Acenaphthylene	1,000	2,500	84		NT	NT	NT	NT	NT
Anthracene	1,000	2,500	400		NT	NT	NT	NT	NT
Benzo[a]anthracene	1	7.8	1		NT	NT	NT	NT	NT
Benzo[a]pyrene	1	1	1		NT	NT	NT	NT	NT
Benzo[b]fluoranthene	1	7.8	1		NT	NT	NT	NT	NT
Benzo[g,h,i]perylene	1,000	2,500	42		NT	NT	NT	NT	NT
Benzo[k]fluoranthene	8.4	78	1		NT	NT	NT	NT	NT
Chrysene	84	780	1		NT	NT	NT	NT	NT
Dibenz[a,h]anthracene	1	1	1		NT	NT	NT	NT	NT
Fluoranthene	1,000	2,500	56		NT	NT	NT	NT	NT
Fluorene	1,000	2,500	56		NT	NT	NT	NT	NT
Indeno[1,2,3-cd]pyrene	1	7.8	1		NT	NT	NT	NT	NT
Naphthalene	1,000	2,500	56		NT	NT	NT	NT	NT
Phenanthrene	1,000	2,500	40		NT	NT	NT	NT	NT
Pyrene	1,000	2,500	40		NT	NT	NT	NT	NT
USEPA Method 8260 Volatile Organic Compounds (VOCs)									
Ethylbenzene	500	1,000	10.1		ND<0.005	NT	NT	NT	ND<0.005
Isopropylbenzene	500	1,000	132		ND<0.005	NT	NT	NT	ND<0.005
4-Isopropyltoluene	500	1,000	41.8		ND<0.005	NT	NT	NT	ND<0.005
Naphthalene	1,000	2,500	56		ND<0.005	NT	NT	NT	0.019
n-Propylbenzene	500	1,000	14		ND<0.005	NT	NT	NT	ND<0.005
Tetrachloroethene	12	110	1		ND<0.005	NT	NT	NT	ND<0.005
Toluene	500	1,000	67		ND<0.005	NT	NT	NT	ND<0.005
Trichloroethene	56	520	1.0		ND<0.005	NT	NT	NT	ND<0.005
1,1,1-Trichloroethane	500	1,000	40		ND<0.005	NT	NT	NT	ND<0.005
1,2,4-Trimethylbenzene	500	1,000	70		ND<0.005	NT	NT	NT	ND<0.005
1,3,5-Trimethylbenzene	500	1,000	70		ND<0.005	NT	NT	NT	ND<0.005
Xylenes (total)	500	1,000	19.5		ND<0.005	NT	NT	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-RRR	TB-RRR	TB-SSS	TB-SSS	TB-SSS
Depth Below Grade (ft.)					(0.6-2.6)	(4.6-6.6)	(0.0-0.3)	(0.3-0.6)	(2.6-4.6)
Sample Collection Date					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
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-RRR	TB-RRR	TB-SSS	TB-SSS	TB-SSS
Depth Below Grade (ft.)					(0.6-2.6)	(4.6-6.6)	(0.0-0.3)	(0.3-0.6)	(2.6-4.6)
Sample Collection Date					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	ND<50	620	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-TTT	TB-TTT	TB-TTT	TB-TTT	TB-UUU	TB-UUU
Depth Below Grade (ft.)				(0.0-0.3)	(0.3-0.6)	(0.6-2.6)	(4.6-6.6)	(0.0-0.3)	(0.3-0.6)
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	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	ND<0.005	NT	NT	NT
Isopropylbenzene	500	1,000	132	NT	NT	ND<0.005	NT	NT	NT
4-Isopropyltoluene	500	1,000	41.8	NT	NT	ND<0.005	NT	NT	NT
Naphthalene	1,000	2,500	56	NT	NT	ND<0.005	NT	NT	NT
n-Propylbenzene	500	1,000	14	NT	NT	ND<0.005	NT	NT	NT
Tetrachloroethene	12	110	1	NT	NT	ND<0.005	NT	NT	NT
Toluene	500	1,000	67	NT	NT	ND<0.005	NT	NT	NT
Trichloroethene	56	520	1.0	NT	NT	ND<0.005	NT	NT	NT
1,1,1-Trichloroethane	500	1,000	40	NT	NT	ND<0.005	NT	NT	NT
1,2,4-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.005	NT	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	ND<0.005	NT	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	ND<0.005	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-TTT	TB-TTT	TB-TTT	TB-TTT	TB-UUU
Depth Below Grade (ft.)					(0.0-0.3)	(0.3-0.6)	(0.6-2.6)	(4.6-6.6)	(0.0-0.3)
Sample Collection Date					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	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-TTT	TB-TTT	TB-TTT	TB-TTT	TB-UUU	TB-UUU
Depth Below Grade (ft.)			GB Area	(0.0-0.3)	(0.3-0.6)	(0.6-2.6)	(4.6-6.6)	(0.0-0.3)	(0.3-0.6)
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.

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-UUU	TB-UUU	TB-UUU	TB-UUU	TB-UUU	TB-UUU
Depth Below Grade (ft.)			GB Area	(0.6-2.6)	(2.6-4.6)	(4.6-6.6)	(10-15)	(15-17)	(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	ND<0.20	NT	0.50	0.24	ND<0.20
Acenaphthylene	1,000	2,500	84	ND<0.20	ND<0.20	NT	1.3	1.2	ND<0.20
Anthracene	1,000	2,500	400	ND<0.20	0.30	NT	1.5	0.99	ND<0.20
Benzo[a]anthracene	1	7.8	1	ND<0.20	1.2	NT	2.6	3.5	ND<0.20
Benzo[a]pyrene	1	1	1	0.27	1.1	NT	3.3	6.3	ND<0.20
Benzo[b]fluoranthene	1	7.8	1	0.27	1.7	NT	3.6	7.2	ND<0.20
Benzo[g,h,i]perylene	1,000	2,500	42	0.30	1.3	NT	2.3	2.4	ND<0.20
Benzo[k]fluoranthene	8.4	78	1	ND<0.20	0.75	NT	1.6	4.0	ND<0.20
Chrysene	84	780	1	ND<0.20	1.1	NT	2.6	4.1	ND<0.20
Dibenz[a,h]anthracene	1	1	1	ND<0.20	0.25	NT	0.30	0.66	ND<0.20
Fluoranthene	1,000	2,500	56	0.24	2.4	NT	5.3	13	ND<0.20
Fluorene	1,000	2,500	56	ND<0.20	ND<0.20	NT	1.9	0.30	ND<0.20
Indeno[1,2,3-cd]pyrene	1	7.8	1	0.28	1.3	NT	2.6	2.8	ND<0.20
Naphthalene	1,000	2,500	56	ND<0.20	ND<0.20	NT	3.8	0.72	ND<0.20
Phenanthrene	1,000	2,500	40	ND<0.20	1.4	NT	6.2	1.7	ND<0.20
Pyrene	1,000	2,500	40	0.22	2.0	NT	5.0	14	ND<0.20
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-UUU	TB-UUU	TB-UUU	TB-UUU	TB-UUU	TB-UUU
Depth Below Grade (ft.)			GB Area	(0.6-2.6)	(2.6-4.6)	(4.6-6.6)	(10-15)	(15-17)	(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	NT	ND<0.50	NT	ND<0.50	NT
PCB-1248	1	10	NA	NT	NT	ND<0.50	NT	ND<0.50	NT
PCB-1254	1	10	NA	NT	NT	ND<0.50	NT	ND<0.50	NT
PCB-1260	1	10	NA	NT	NT	ND<0.50	NT	ND<0.50	NT
Cyanide (total)	1,400	41,000	NA	ND<5.0	ND<5.0	NT	ND<5.0	ND<5.0	ND<5.0
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-UUU	TB-UUU	TB-UUU	TB-UUU	TB-UUU
Depth Below Grade (ft.)					(0.6-2.6)	(2.6-4.6)	(4.6-6.6)	(10-15)	(15-17)
Sample Collection Date					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.

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-VVV	TB-VVV	TB-VVV	TB-VVV	TB-VVV	TB-VVV
Depth Below Grade (ft.)			GB Area	(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 8270 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	0.23
Benzo[b]fluoranthene	1	7.8	1	NT	NT	NT	NT	NT	0.21
Benzo[g,h,i]perylene	1,000	2,500	42	NT	NT	NT	NT	NT	0.22
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	0.23
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	0.23
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	0.34	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	0.013	NT	NT
1,3,5-Trimethylbenzene	500	1,000	70	NT	NT	NT	0.0071	NT	NT
Xylenes (total)	500	1,000	19.5	NT	NT	NT	ND<0.005	NT	NT

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.

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-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

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-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

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-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.
- 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-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

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-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

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-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.
- 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.

Ta 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 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

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.2 Page 46 of 117

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		TB-AAAA	TB-BBBB	TB-BBBB	TB-BBBB	TB-BBBB	TB-BBBB
Depth Below Grade (ft.)			GB Area	(15-17)	(0.0-0.3)	(0.3-1.3)	(2.3-4.3)	(4.3-6.3)	(10-12)
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	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

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.2 Page 52 of 117

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		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
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

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.2 Page 56 of 117

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)
Depth Below Grade (ft.)				(10-12)	(15-17)	(0.0-0.3)	(1.3-1.6)	(1.6-2.6)	(3.3-4.3)
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	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 (10-12) 4/3/2002	TB-CCCC (15-17) 4/3/2002	TB-DDDD (0.0-0.3) 4/3/2002	TB-DDDD (1.3-1.6) 4/3/2002	TB-DDDD (1.6-2.6) 4/3/2002
Depth Below Grade (ft.)									
Sample Collection Date									
USEPA Method 8082 Polychlorinated Biphenyls (PCBs)									
PCB-1242	1	10	NA	ND<0.50	NT	ND<0.50	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	ND<0.50
PCB-1254	1	10	NA	ND<0.50	NT	ND<0.50	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	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-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.)				4/3/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002	4/4/2002
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	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-FFFF
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 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

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		TB-GGGG	TB-GGGG	TB-HHHH	TB-HHHH	TB-HHHH	TB-HHHH
Depth Below Grade (ft.)			GB Area	(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 (0.0-0.3) 4/4/2002	TB-MMMM (0.5-0.8) 4/4/2002	TB-MMMM (0.8-1.8) 4/4/2002	TB-MMMM (4.5-6.5) 4/4/2002	TB-NNNN (0.0-0.3) 4/4/2002
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		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-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
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

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.2 Page 85 of 117

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

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		TB-PPPP	TB-PPPP	TB-PPPP	TB-QQQQ	TB-QQQQ	TB-QQQQ
Depth Below Grade (ft.)			GB Area	(0.3-0.6)	(0.9-1)	(2.3-4.3)	(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	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

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.2 Page 88 of 117

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		GB Area	TB-UUUU	TB-VVVV	TB-VVVV	TB-VVVV	TB-WWWW
Depth Below Grade (ft.)					(5-7)	(0.0-0.3)	(0.5-2.5)	(2.5-4.5)	(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	ND<0.006	NT	NT
Arsenic	NA	NA	0.5		NT	NT	ND<0.05	NT	NT
Barium	NA	NA	10		NT	NT	0.19	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
Mercury	NA	NA	0.02		NT	NT	ND<0.002	NT	NT
Nickel	NA	NA	1.0		NT	NT	ND<0.05	NT	NT
Selenium	NA	NA	0.50		NT	NT	ND<0.01	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	0.21	NT	NT
Total Metals									
Antimony	27	8,200	NA		NT	NT	ND<2.0	NT	NT
Arsenic	10	10	NA		NT	NT	18	NT	NT
Barium	4,700	140,000	NA		NT	NT	59	NT	NT
Beryllium	2	2	NA		NT	NT	ND<1.0	NT	NT
Cadmium	34	1,000	NA		NT	NT	1.9	NT	NT
Chromium	100*	100*	NA		NT	NT	5.7	NT	NT
Copper	2,500	76,000	NA		NT	NT	180	NT	NT
Lead	500	1,000	NA		NT	NT	190	NT	NT
Mercury	20	610	NA		NT	NT	0.74	NT	NT
Nickel	1,400	7,500	NA		NT	NT	7.2	NT	NT
Selenium	340	10,000	NA		NT	NT	ND<1.0	NT	NT

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.2 Page 95 of 117

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		GB Area	TB-WWWW	TB-XXXX	TB-XXXX	TB-XXXX	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
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	TB-YYYY	TB-YYYY	TB-ZZZZ	TB-ZZZZ	TB-ZZZZ
Depth Below Grade (ft.)				(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
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 (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 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	NT
Arsenic	NA	NA	0.5	NT	NT	NT	NT	ND<0.05	NT
Barium	NA	NA	10	NT	NT	NT	NT	0.16	NT
Copper	NA	NA	13	NT	NT	NT	NT	ND<0.04	NT
Lead	NA	NA	0.15	NT	NT	NT	NT	ND<0.013	NT
Mercury	NA	NA	0.02	NT	NT	NT	NT	ND<0.002	NT
Nickel	NA	NA	1.0	NT	NT	NT	NT	ND<0.05	NT
Selenium	NA	NA	0.50	NT	NT	NT	NT	ND<0.01	NT
Thallium	NA	NA	0.05	NT	NT	NT	NT	ND<0.005	NT
Vanadium	NA	NA	0.50	NT	NT	NT	NT	ND<0.05	NT
Zinc	NA	NA	50	NT	NT	NT	NT	0.12	NT
Total Metals									
Antimony	27	8,200	NA	NT	NT	NT	NT	ND<2.0	NT
Arsenic	10	10	NA	NT	NT	NT	NT	4.4	NT
Barium	4,700	140,000	NA	NT	NT	NT	NT	17	NT
Beryllium	2	2	NA	NT	NT	NT	NT	ND<1.0	NT
Cadmium	34	1,000	NA	NT	NT	NT	NT	0.58	NT
Chromium	100*	100*	NA	NT	NT	NT	NT	4.1	NT
Copper	2,500	76,000	NA	NT	NT	NT	NT	8.8	NT
Lead	500	1,000	NA	NT	NT	NT	NT	8.7	NT
Mercury	20	610	NA	NT	NT	NT	NT	ND<0.20	NT
Nickel	1,400	7,500	NA	NT	NT	NT	NT	5.1	NT
Selenium	340	10,000	NA	NT	NT	NT	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-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	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)	(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
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
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	NT
Arsenic	NA	NA	0.5		NT	NT	NT	ND<0.05	NT
Barium	NA	NA	10		NT	NT	NT	0.16	NT
Copper	NA	NA	13		NT	NT	NT	ND<0.04	NT
Lead	NA	NA	0.15		NT	NT	NT	ND<0.013	NT
Mercury	NA	NA	0.02		NT	NT	NT	ND<0.002	NT
Nickel	NA	NA	1.0		NT	NT	NT	ND<0.05	NT
Selenium	NA	NA	0.50		NT	NT	NT	ND<0.01	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	0.13	NT
Total Metals									
Antimony	27	8,200	NA		NT	NT	NT	ND<2.0	NT
Arsenic	10	10	NA		NT	NT	NT	1.9	NT
Barium	4,700	140,000	NA		NT	NT	NT	35	NT
Beryllium	2	2	NA		NT	NT	NT	ND<1.0	NT
Cadmium	34	1,000	NA		NT	NT	NT	0.76	NT
Chromium	100*	100*	NA		NT	NT	NT	5.0	NT
Copper	2,500	76,000	NA		NT	NT	NT	16	NT
Lead	500	1,000	NA		NT	NT	NT	14	NT
Mercury	20	610	NA		NT	NT	NT	ND<0.20	NT
Nickel	1,400	7,500	NA		NT	NT	NT	4.4	NT
Selenium	340	10,000	NA		NT	NT	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-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	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
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-CCCCC	TB-CCCCC	TB-CCCCC	TB-DDDDD	TB-DDDDD	TB-EEEEEE
Depth Below Grade (ft.)			GB Area	(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-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 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	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)
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		ND<0.006	NT	NT	NT	NT
Arsenic	NA	NA	0.5		ND<0.05	NT	NT	NT	NT
Barium	NA	NA	10		0.36	NT	NT	NT	NT
Copper	NA	NA	13		ND<0.04	NT	NT	NT	NT
Lead	NA	NA	0.15		ND<0.013	NT	NT	NT	NT
Mercury	NA	NA	0.02		ND<0.002	NT	NT	NT	NT
Nickel	NA	NA	1.0		ND<0.05	NT	NT	NT	NT
Selenium	NA	NA	0.50		ND<0.01	NT	NT	NT	NT
Thallium	NA	NA	0.05		ND<0.005	NT	NT	NT	NT
Vanadium	NA	NA	0.50		ND<0.05	NT	NT	NT	NT
Zinc	NA	NA	50		0.23	NT	NT	NT	NT
Total Metals									
Antimony	27	8,200	NA		ND<2.0	NT	NT	NT	NT
Arsenic	10	10	NA		2.7	NT	NT	NT	NT
Barium	4,700	140,000	NA		26	NT	NT	NT	NT
Beryllium	2	2	NA		ND<1.0	NT	NT	NT	NT
Cadmium	34	1,000	NA		1.0	NT	NT	NT	NT
Chromium	100*	100*	NA		6.7	NT	NT	NT	NT
Copper	2,500	76,000	NA		42	NT	NT	NT	NT
Lead	500	1,000	NA		21	NT	NT	NT	NT
Mercury	20	610	NA		ND<0.20	NT	NT	NT	NT
Nickel	1,400	7,500	NA		9.2	NT	NT	NT	NT
Selenium	340	10,000	NA		ND<1.0	NT	NT	NT	NT

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.2 Page 110 of 117

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.)			GB Area	(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
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 (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.)									
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		SS-AA	SS-AA	SS-BB	SS-BB	SS-CC	SS-CC
Depth Below Grade (ft.)			GB Area	(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
Total Metals								NT	
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.

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.3 Page 3 of 12

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.)			GB Area	(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		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.

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.3 Page 6 of 12

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		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
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.

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.3 Page 9 of 12

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
Depth Below Grade (ft.)					(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	4/4/02
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.

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030a

Table AOC-12.3 Page 12 of 12

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-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
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		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
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		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)
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	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		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
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		GB Area	TB-YYYYY	TB-YYYYY	TB-YYYYY	TB-ZZZZZ
Depth Below Grade (ft.)					(0.0-0.3)	(0.3-2.3)	(4-6)	(0.0-0.3)
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	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)
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	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
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	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

ADVANCED ENVIRONMENTAL INTERFACE, INC.

AEI-00T-030d

Table South.2 Page 1 of 2