TABLE 12-11
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
SEDIMENT - TIDAL FLATS

REMEDIAL INVESTIGATION REPORT
STRATFORD ARMY ENGINE PLANT
STRATFORD, CONNECTICUT

Scenario Timeframe: Current/Future Land Use
Medium: Sediment
Exposure Medium: Sediment
Exposure Point: Tidal Flats

CAS NUMBER	CHEMICAL	DETECTION FREQUENCY	RANGE OF DETECTION LIMITS MIN-MAX	MINIMUM (1) CONCENTRATION	MINIMUM QUALIFIER	MAXIMUM (1) CONCENTRATION	MAXIMUM QUALIFIER	SAMPLE ID OF MAXIMUM CONCENTRATION	AVERAGE (2) CONCENTRATION	UNITS	95% UCL	SCREENING TOXICITY VALUE (3) MG/L	BACKGROUND VALUE (4)	RETAIN AS COPC?	RATIONALE FOR CONTAMINANT DELETION OR SELECTION (5)
	Volatile Organics														
540-59-0	1,2-Dichloroethene (total)	2/ 14	.003 - .005	0.002	J	0.003	J	SDTD007A	0.0021	mg/kg	0.0024	6.4	ND	NO	LTS
67-64-1	Acetone	2/ 14	.004 - .008	0.007	J	0.033	J	SDTG001A	0.0055	mg/kg	0.0055	0.0091	ND	YES	
75-15-0	Carbon disulfide	3/ 14	.003 - .005	0.002	J	0.003		SDTG003A	0.0022	mg/kg	0.0024	0.23	ND	NO	LTS
100-41-4	Ethyl benzene	1/ 15	.003 - .005	0.17		0.17		02-0-12	0.0132	mg/kg	0.0132	5.4	ND	NO	LTS
591-78-6	Methyl butyl ketone	2/ 14	.006 - .011	0.01		0.017		SDTB006A	0.00554	mg/kg	0.0055	7.4	ND	NO	LTS
75-09-2	Methylene chloride	3/ 17	.003 - .077	0.057		0.12		02-0-12	0.02	mg/kg	0.0022	7.2	ND	NO	LTS
108-88-3	Toluene	1/ 15	.001 - .003	0.059		0.059		02-0-12	0.0049	mg/kg	0.0049	6.4	ND	NO	LTS
79-01-6	Trichloroethene	2/ 14	.001 - .002	0.004		0.024	J	SDTD006A	0.00282	mg/kg	0.003	33	ND	NO	LTS
	Semivolatile Organics														
120-82-1	1,2,4-Trichlorobenzene	1/ 1	0 - 0	0.021	J	0.021	J	07-0-12	0.021	mg/kg	NC	9.6	ND	NO	LTS
90-12-0	1-Methylnaphthalene	1/ 14	.018 - .032	0.065		0.065		SDTH001A	0.0162	mg/kg	0.0162	0.07	ND	NO	LTS
91-57-6	2-Methylnaphthalene	15/ 15	0 - 0	0.13	P	1	PDJ	SDTG004AR2	0.373	mg/kg	0.505	0.07	0.08867	YES	
83-32-9	Acenaphthene	28/ 42	.48 - 3	0.009	J	3.1	DJ	SDTG004AR2	0.621	mg/kg	0.6209	0.016	0.163	YES	
208-96-8	Acenaphthylene	12/ 36	.029 - 4	0.017	J	0.21	J	TF3-0-6	0.259	mg/kg	0.5335	0.044	ND	YES	
120-12-7	Anthracene	30/ 38	.48 - 3	0.018		3.2		06-0-12	0.385	mg/kg	0.5811	0.0572	ND	YES	
56-55-3	Benzo[a]anthracene	40/ 47	.47 - 3.5	0.091	J	6.5	D	TF1-0-6	0.782	mg/kg	0.78	0.108	0.07	YES	
50-32-8	Benzo[a]pyrene	36/ 43	.48 - 3	0.031	J	3.4	DJ	TF1-0-6	0.623	mg/kg	0.6232	0.15	0.14625	YES	
205-99-2	Benzo[b]fluoranthene	37/ 47	.47 - 3.5	0.034	J	2.8	DJ	TF1-0-6	0.604	mg/kg	0.604	0.24	0.0967	YES	
191-24-2	Benzo[ghi]perylene	30/ 40	.48 - 3	0.1	J	1.8	DJ	TF1-0-6	0.420	mg/kg	0.5220	0.17	0.07633	YES	
207-08-9	Benzo[k]fluoranthene	37/ 47	.47 - 3.5	0.028	J	3	DJ	TF1-0-6	0.523	mg/kg	0.5231	0.24	0.05567	YES	
65-85-0	Benzoic Acid	2/ 2	0 - 0	0.02	J	0.042	J	07-0-12	0.031	mg/kg	NC	0.65	ND	NO	LTS
117-81-7	Bis(2-Ethylhexyl)phthalate	5/ 5	0 - 0	0.11		5.6	J	02-0-12	1.43	mg/kg	NC	890	ND	NO	LTS
85-68-7	Butylbenzylphthalate	2/ 2	0 - 0	0.37		0.62	J	02-0-12	0.495	mg/kg	NC	11	ND	NO	LTS
218-01-9	Chrysene	42/ 47	.47 - 3.5	0.12	J	6.5	D	TF1-0-6	0.872	mg/kg	0.87	0.166	0.0847	YES	
53-70-3	Dibenz[a,h]anthracene	15/ 15	0 - 0	0.028	P	0.54	J	06-0-12	0.0829	mg/kg	0.0829	0.033	0.01152	YES	
132-64-9	Dibenzofuran	3/ 3	0 - 0	0.004	J	0.83	J	06-0-12	0.282	mg/kg	NC	0.42	ND	YES	
84-66-2	Diethylphthalate	1/ 1	0 - 0	0.006	J	0.006	J	07-0-12	0.006	mg/kg	NC	0.6	ND	NO	LTS
84-74-2	Di-n-butylphthalate	3/ 3	0 - 0	2.1	J	4.4		05-0-12	3.3	mg/kg	NC	11	ND	NO	LTS
117-84-0	Di-n-octylphthalate	1/ 1	0 - 0	0.032	J	0.032	J	06-0-12	0.032	mg/kg	NC	11	ND	NO	LTS
206-44-0	Fluoranthene	45/ 49	.47 - 3	0.024	J	14	D	TF1-0-6	1.60	mg/kg	1.60	0.423	0.172	YES	
86-73-7	Fluorene	22/ 29	.48 - 1.5	0.0092	P	1.8	DJ	TF1-0-6	0.285	mg/kg	0.2852	0.019	0.0076	YES	
193-39-5	Indeno[1,2,3-cd]pyrene	29/ 35	.48 - 1.5	0.11	J	1.9	J	06-0-12	0.376	mg/kg	0.3760	0.2	0.059	YES	
91-20-3	Naphthalene	16/ 16	0 - 0	0.057		0.7	J	06-0-12	0.137	mg/kg	0.1374	0.16	0.02017	YES	
86-30-6	N-Nitrosodiphenylamine	1/ 1	0 - 0	0.063	J	0.063	J	01-0-12	0.063	mg/kg	NC	0.028	ND	YES	
85-01-8	Phenanthrene	44/ 47	.47 - .5	0.065	J	11	J	06-0-12	0.9498	mg/kg	0.95	0.204	0.086	YES	
129-00-0	Pyrene	47/ 48	.5 - .5	0.033	J	12	D	TF1-0-6	1.423	mg/kg	1.42	0.195	0.1883	YES	
PAH	Total PAHs	48/ 50	1.2 - 6.5	0.057		69		TF1-0-6	8.93	mg/kg	15.2	1.61	1.096	YES	
	Inorganics/Metals														
7429-90-5	Aluminum	21/ 21	0 - 0	4510		18600		01-0-12	8964	mg/kg	10518	3300	3870	YES	
7440-36-0	Antimony	23/ 39	4.7 - 9.5	0.82	N	28.5		01-0-12	4.47	mg/kg	4.47	2	0.955	YES	
7440-38-2	Arsenic	50/ 50	0 - 0	0.97		8.7		TA2-0-6	5.1	mg/kg	5.51	6	1.635	YES	
7440-39-3	Barium	21/ 21	0 - 0	14.5		209		02-0-12	49	mg/kg	49.0	45	15.87	YES	
7440-41-7	Beryllium	42/ 43	.25 - .25	0.19		4.7		02-0-12	0.652	mg/kg	0.6517	0.88	0.16	YES	
7440-43-9	Cadmium	42/ 43	.34 - .34	0.25		8.2	J	TE1-0-6	2.41	mg/kg	2.41	0.6	0.4875	YES	
7440-70-2	Calcium	21/ 21	0 - 0	860		25400		SDTG004A	4406	mg/kg	4405.7	0	1680	NO	EN
7440-47-3	Chromium	50/ 50	0 - 0	7.5		916		TE4-0-6	255	mg/kg	255.02	26	24.725	YES	
7440-48-4	Cobalt	21/ 21	0 - 0	4.7	B	55.9		02-0-12	11.9	mg/kg	11.90	50	4.13	YES	
7440-50-8	Copper	50/ 50	0 - 0	13.9		1410		TA4-0-6	385.4	mg/kg	658.8	16	82.85	YES	
74-90-8	Hydrogen Cyanide	1/ 1	0 - 0	0.54		0.54		05-0-12	0.54	mg/kg	NC	0	ND	YES	

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CAS NUMBER	CHEMICAL	DETECTION FREQUENCY	RANGE OF DETECTION LIMITS MIN-MAX	MINIMUM (1) CONCENTRATION	MINIMUM QUALIFIER	MAXIMUM (1) CONCENTRATION	MAXIMUM QUALIFIER	SAMPLE ID OF MAXIMUM CONCENTRATION	AVERAGE (2) CONCENTRATION	UNITS	95% UCL	SCREENING TOXICITY VALUE (3) MG/L	BACKGROUND VALUE (4)	RETAIN AS COPC?	RATIONALE FOR CONTAMINANT DELETION OR SELECTION (5)
7439-89-6	Iron	21/ 21	0 - 0	8160		32500		01-0-12	19250	mg/kg	22574	20000	7323.3	YES	
7439-92-1	Lead	50/ 50	0 - 0	0.29		173		01-0-12	64.2	mg/kg	75.08	31	15.2	YES	
7439-95-4	Magnesium	21/ 21	0 - 0	2200		10100		01-0-12	5835.7	mg/kg	6931.5	0	3173.3	NO	EN
7439-96-5	Manganese	21/ 21	0 - 0	102		993		02-0-12	310	mg/kg	310.00	460	104.733	YES	
7439-97-6	Mercury	39/ 49	.14 - .2	0.14	B	523		TC1-0-6	13.94	mg/kg	13.94	0.15	0.11	YES	
22967-92-6	Methyl mercury	14/ 14	0 - 0	0.00051		0.0029		SDTA007A	0.00136	mg/kg	0.0018	0	0.000873	YES	
7440-02-0	Nickel	48/ 50	.7 - .81	2.2		789		02-0-12	65.2	mg/kg	65.21	16	7.575	YES	
7440-09-7	Potassium	21/ 21	0 - 0	886		5100		01-0-12	2616	mg/kg	3304.1	0	1544	NO	EN
7782-49-2	Selenium	14/ 14	0 - 0	0.79	N	1.8	NJ	SDTG001A	1.16	mg/kg	1.33	1	0.67	YES	
7440-22-4	Silver	34/ 45	.25 - .92	0.75	B	383	J	TC5-0-6	37.1	mg/kg	110.29	0.5	ND	YES	
7440-23-5	Sodium	21/ 21	0 - 0	1550		17400		01-0-12	8243	mg/kg	9646.33	0	5350	NO	EN
7440-28-0	Thallium	6/ 14	.14 - .26	0.29	BN	0.5	B	SDTD007A	0.203	mg/kg	0.2700	5	ND	NO	LTS
7440-62-2	Vanadium	21/ 21	0 - 0	12.2		781		02-0-12	67.0	mg/kg	67.05	6.4	10.27	YES	
7440-66-6	Zinc	45/ 45	0 - 0	45.5		568	J	TE2-0-6	268.2	mg/kg	353.93	120	59.9	YES	
	Pests/PCBs														
12672-29-6	Aroclor-1248	30/ 42	.015 - .18	0.035		130	J	TC1-0-6	5.073	mg/kg	5.07	0.03	0.0777	YES	
11097-69-1	Aroclor-1254	10/ 19	.0052 - .15	0.048		0.61		SDTC006A	0.1378	mg/kg	1.6162	0.06	ND	YES	
11096-82-5	Aroclor-1260	32/ 43	.11 - .18	0.039	P	0.85		TE4-0-6	0.1705	mg/kg	0.2126	0.005	0.03825	YES	
PCB	Total PCBs	39/ 46	.11 - .36	0.110		130		TC1-0-6	4.86	mg/kg	2.642	0.0227	0.137	YES	
	Miscellaneous														
7440-44-0	Carbon	23/ 23	0 - 0	16800		145000		SDTA001A	52778	mg/kg	NC	#N/A	21926.7	NA	
HLA0048	AVS/SEM Ratio	14/ 14	0 - 0	0.0509		5.34		SDTC007A	1.68	NA	NC	#N/A	0.107	NA	

(1) Minimum or maximum concentration detected in exposure area. Samples included in data set are provided in **Appendix T-1**.
(2) Average concentration is calculated using 1/2 the detection limit for non-detects.
(3) Lowest of screening toxicity values presented in Table 12-38.
(4) Background values are presented in Table 12-14. The background concentration shown here is equal to the average background concentration.
(5) LTS = less than screening toxicity value; EN = essential nutrient
B - report value less than Contract Required Detection Limit but greater than or equal to the Instrument Detection Limit
D - Dilution
J - estimated value
N - Tentatively Identified Compound
P - a greater than 25% difference was detected between GC columns