Table 4-1
1999 Sediment Data Summary - Detected Analytes
NRG Middletown

CONSTITUENT	MD-SED-01 1/11/1999 outfall Primary	MD-SED-02 1/11/1999 outfall Primary	MD-SED-03 1/11/1999 outfall Primary	MD-SED-04 1/11/1999 Dupes Combined	MD-SED-05 1/11/1999 outfall Primary	MD-SED-06 1/11/1999 outfall Primary	MD-SED-07 1/11/1999 outfall Primary	MD-SED-08 1/11/1999 outfall Primary	MD-SED-09 1/12/1999 barge dock Primary	MD-SED-10 1/12/1999 barge dock Primary	MD-SED-11 1/11/1999 barge dock Primary	MD-SED-12 1/11/1999 upstream Primary	Statistics Exclude Offsite (upstream) Sample: Number Times Detected	Number Samples Analyzed	Minimum Conc.	Maximum Conc.	Maximum Conc. Location	CT Res DEC	Sediment Benchmarks: TEC (or equivalent)	PEC (or equivalent)
Volatile Organic Compounds (ug/kg)																				
Acetone	**53**	**61**	<20	<20	**130**	<20	<20	<20				40	3	8	53	130	MD-SED-05	500000	8.7 (2)	NE
Methylene Chloride	3.3	5.2	2.5	2.45	3.2	2.8	2.7	2.9				3.4	8	8	2.45	5.2	MD-SED-02	47000	370 (2)	NE
Toluene	1.5	4.3	<1	<1	<1	<1	<1	<1				<1	2	8	1.5	4.3	MD-SED-02	500000	50 (2)	NE
Xylene (total)	<1	<1	<1	<1	2.4	<1	1.6	<1				1.3	2	8	1.6	2.4	MD-SED-05	500000	160 (2)	NE
Total Petroleum Hydrocarbons (mg/kg)																				
TPH	14	6	<5	13	794	8	8	8	16	11	11	11	10	11	6	794	MD-SED-05	500	NE	NE
Semi-Volatile Organic Compounds (ug/kg)																				
Anthracene	<170	<170	<170	<170	<170	<170	**940**	<170	<170	<170	<170	<170	1	11	940	940	MD-SED-07	1000000	57.2 (1a)	845 (1b)
Benzo(a)anthracene	<170	<170	<170	<170	<170	**440**	**1400**	<170	<170	<170	<170	<170	2	11	440	1400	MD-SED-07	1000	108 (1a)	1050 (1b)
Benzo(b)fluoranthene	<170	<170	<170	<170	<170	**360**	**760**	<170	<170	<170	<170	<170	2	11	360	760	MD-SED-07	1000	240 (5a)	13400 (5b)
Benzo(k)fluoranthene	<170	<170	<170	<170	<170	**440**	**1200**	<170	<170	<170	<170	<170	2	11	440	1200	MD-SED-07	8400	240 (5a)	13400 (5b)
Benzo(ghi)perylene	<170	<170	<170	<170	<170	**210**	**660**	<170	<170	<170	<170	<170	2	11	210	660	MD-SED-07	1000000	170 (5a)	3200 (5b)
Benzo(a)pyrene	<170	<170	<170	<170	<170	**420**	**1500**	<170	<170	<170	<170	<170	2	11	420	1500	MD-SED-07	1000	150 (1a)	1450 (1b)
Bis(2-ethylhexyl)phthalate	<170	<170	<170	<170	<170	<170	<170	<170				340	0	8	0	0		44000	890,000 (2)	NE
Chrysene	<170	<170	<170	<170	**290**	**490**	**1500**	<170	<170	<170	<170	<170	3	11	290	1500	MD-SED-07	84000	166 (1a)	1290 (1b)
Fluoranthene	<170	<170	<170	210	320	**1000**	**2600**	<170	<170	<170	<170	<170	4	11	210	2600	MD-SED-07	1000000	423 (1a)	2230 (1b)
Indeno(1,2,3-cd)pyrene	<170	<170	<170	<170	<170	**210**	<170	<170	<170	<170	<170	<170	1	11	210	210	MD-SED-06	1000	78 (3a)	836.66 (3b)
Phenanthrene	<170	<170	<170	<170	<170	**610**	**440**	<170	<170	<170	<170	<170	2	11	440	610	MD-SED-06	1000000	204 (1a)	1170 (1b)
Pyrene	<170	<170	<170	190	**500**	**960**	**3900**	<170	<170	<170	<170	<170	4	11	190	3900	MD-SED-07	1000000	195 (1a)	1520 (1b)
Metals (mg/kg)																				
Arsenic	3.55	5.33	1.81	2.37	4.01	1.62	2.1	1.83				1.51	8	8	1.62	5.33	MD-SED-02	10	9.79 (1a)	33 (1b)
Beryllium	0.395	0.356	0.246	0.264	0.493	0.23	0.287	0.214				0.307	8	8	0.214	0.493	MD-SED-05	2	NE	NE
Chromium	13.4	9.8	10.2	7.75	31.9	12.7	9.4	5.8				14.2	8	8	5.8	31.9	MD-SED-05	100	43.4 (1a)	111 (1b)
Copper	17.4	11.8	10.4	9.65	**54.1**	5.6	7.9	3.9				13.7	8	8	3.9	54.1	MD-SED-05	2500	31.6 (1a)	149 (1b)
Lead	7.8	7.7	16.3	5.5	**73**	6.9	8.6	5.6				7.6	8	8	5.5	73	MD-SED-05	500	35.8 (1a)	128 (1b)
Mercury	<0.21	<0.22	<0.19	<0.185	**0.59**	<0.20	<0.18	<0.18				<0.22	1	8	0.59	0.59	MD-SED-05	20	0.18 (1a)	1.06 (1b)
Nickel	**48.7**	22.4	14.1	11.5	18.5	15.2	13	8.3				12.2	8	8	8.3	48.7	MD-SED-01	1400	22.7 (1a)	48.6 (1b)
Selenium	0.486	0.427	0.356	0.506	0.742	<0.242	0.349	0.257				0.27	7	8	0.257	0.742	MD-SED-05	340	NE	NE
Silver	<0.52	<0.55	<0.47	<0.495	0.7	<0.48	<0.50	<0.46				<0.47	1	8	0.7	0.7	MD-SED-05	340	1 (4a)	3.7 (4b)
Thallium	0.86	0.7	<0.47	0.85	1.5	0.76	0.84	0.65				0.78	7	8	0.65	1.5	MD-SED-05	5.4	NE	NE
Zinc	33.7	40.6	34.2	37.9	**147**	36.9	49.4	32.4				44.2	8	8	32.4	147	MD-SED-05	20000	121 (1a)	459 (1b)

Notes:
Depths of samples collected are from 0 to 20 inches below the river bottom.
NE = Not established
--- = Not analyzed
ug/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
< = Result considered non-detect, reported as less than the indicated reporting limit.
Bold = Result reported exceeds TEC or equivalent lower effect screening value
Shading = Result reported exceeds PEC or equivalent higher effect screening value
CT Res DEC = Connecticut Residential Direct Exposure Criteria

Sediment Benchmark Key:
(1a) Consensus-Based Sediment Quality Guidelines; Threshold Effect Concentration (TEC) from MacDonald et al, 2000.
(1b) Consensus-Based Sediment Quality Guidelines; Probable Effect Concentration (PEC) from MacDonald et al, 2000.
(2) = Secondary Chronic Value from Jones et al, 1997. Not appropriate for use with sediments containing less than 0.2% total organic carbon.
(3a) = Assessment and Remediation of Contaminated Sediments Program (ARCS); Threshold Effects Concentration (TEC) from Jones et al, 1997.
(3b) = ARCS; Probable Effects Concentration (PEC) from Jones et al, 1997.
(4a) = NOAA Effects Range-Low (ER-L) (marine values) from Long et al, 1995.
(4b) = NOAA Effects Range-Medium (ER-M) (marine values) from Long et al, 1995.
(5a) = Ontario Ministry of the Environment (MOE), Lowest Effect Level, from Jones et al, 1997.
(5b) = Ontario MOE, Severe Effect Level, from Jones et al, 1997.