

Table 1
LOWER MANHATTAN PARKS
Sampling Results - TAGM PAHs

DRAFT

Sample ID	City Hall-SW Sect. B'dway & Park	City Hall - Bekman & Park Row	City Hall - Chambers & Elk	Washington Market Park Sand Box	Washington Market Park Flower Bed	Washington Market Park Gazebo	Battery Park Playground	Battery Park Tree Pt Front Field Office	Battery Park Playground State & W
Date Sampled	06/19/02	06/19/02	06/19/02	06/19/02	06/19/02	06/19/02	06/19/02	06/19/02	06/19/02
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Lab ID	N5818-1	N5818-2	N5818-3	N5818-4	N5818-5	N5818-6	N5818-7	N5818-8	N5818-9
PAH (ug/kg)									
Acenaphthene	26.7 U	30.1	35.7	24.5 U	58.1	422	25.7 U	27.3 U	27.1
Acenaphthylene	20.9 U	22.6 U	20.7 U	19.2 U	28.4	53.2	20.1 U	21.4 U	21.2
Anthracene	22 U	76.5	71.3	20.3 U	180	2640	39.1	22.5 U	31.8
Benzo(a)anthracene	103	201	22.4 U	18.1 U	24.5	218	218	107	153
Benzo(a)pyrene	114	312	160	12.8 U	661	230	230	103	136
Benzo(b)fluoranthene	81.2	184	85.2	12.8 U	309	1880	106	46.3	55.3
Benzo(g,h,i)perylene	117 J	309	169	17.1 U	670	222	222	93.7	141
Benzo(k)fluoranthene	131	383	216	24.5 U	17.1	227	227	129	178
Chrysene	17.4 U	17.3 U	17.3 U	16 U	16 U	16.8 U	16.8 U	17.8 U	17.6
Dibenzo(a,h)anthracene	227	660	423	28.8 U	1700	337	337	191	307
Fluoranthene	32.5 U	35.1 U	33.4	29.9 U	61.8	447	31.3 U	33.2	32.9
Fluorene	88.2	193	100	37.3 U	378	2400	123	48.6	62.4
Indeno(1,2,3-cd)pyrene	22 U	36.4	243	20.3 U	201	184	31.3	280	22.4
Naphthalene	90.5	355	292	20.3 U	673	7250	159	108	176
Phenanthrene	182	572	359	36.2 U	1290	10500	308	161	261
Pyrene	17.4 U	18.8 U	66.3	16 U	66.7	116	16.8 U	123	17.6
2-Methylnaphthalene	1389.4	137.0	2618.6	360.5	8754.7	68880.2	2335.3	1495.8	1771.7
Total PAH concentration	684.6	1938.2	1055.3	148.2	4053.4	31104.0	1277.8	805.1	837.0
Total carcinogenic PAH concentration in BaP Equivalents	184	< 467	< 259	< 42	< 961	< 8,080	319	< 152	< 205

Legend
U - Indicates analyte found at or below detection limit of laboratory equipment
B - Indicates analyte found in associated method blank
J - Estimated value
<6 - Undetected at detection limit shown
ug/kg = micrograms per kilogram (parts per billion)
Shaded areas represent a concentration exceeding the TAGM RSCO criteria

Notes
1 - Values for Specific PAH compounds in Urban Residential Soils based upon data obtained from the State of Massachusetts Highway Department report entitled "Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil."
2 - Range of Total and Carcinogenic PAH values in urban soils derived from: Bradley, Magee, and Allen, 1994; International Agency on Cancer (IARC), 1973; White and Vanderslice, 1980; Windsor and Hiles, 1979; Edwards, 1983; Butler et al. 1984; Vogt et al. 1987; Jones et al., 1987.

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Sample ID		Bowling Green Park		Bowling Green Park		Bowling Green Park		Pearl St.		Pearl St.		Pearl St.	
	ater	B'dway & Bowling Green		Flower Bed		Bulls Ent.		Pearl & Fulton		Pearl & Beekman.		Playground	
Date Sampled		06/19/02		06/19/02		06/19/02		06/19/02		06/19/02		06/19/02	
Matrix		Soil		Soil		Soil		Soil		Soil		Soil	
Lab ID		N5818-10		N5818-11		N5818-12		N5818-13		N5818-14		N5818-15	
PAH (ug/kg)													
Acenaphthene	U	27.1	U	27.7	U	376		142		38.1		82.3	
Acenaphthylene	U	21.2	U	21.7	U	104		66.3		25	U	56.6	
Anthracene		37.7		32.5		1320		439		132		267	
Benzo(a)anthracene		164		128		2160		1070		452		1186	
Benzo(a)pyrene		145		131		18.50		955		294		1240	
Benzo(b)fluoranthene		433		98.7		1680		985		413		1340	
Benzo(g,h,i)perylene		70.8		49.3		596		315		130		405	
Benzo(k)fluoranthene		132		107		1680		1000		402		1250	
Chrysene		164		137		2160		1110		301		1340	
Dibenzo(a,h)anthracene	U	17.7	U	18.1	U	181		88.3		20.8	U	112	
Fluoranthene		329		265		5300		2360		906		2410	
Fluorene	U	33	U	33.7	U	371		142		34.7	J	77.1	
Indeno(1,2,3-cd)pyrene		73.1		54.2		739		390		164		492	
Naphthalene	U	22.4	U	22.9	U	224		100		26.4	U	54	
Phenanthrene		171		154		4870		1880		473		1210	
Pyrene		255		220		4340		2020		695		2200	
2-Methylnaphthalene	U	17.7	U	18.1	U	112		56.3		20.8	U	39.8	
Total PAH concentration		2096.0		1480.8		25999.5		13093.1		4807.0		13716.0	
Total carcinogenic PAH concentration		1128.8		654.0		8498.5		5628.8		2346.8		6954.0	
Total carcinogenic PAH concentration in BaP Equivalents	<	233	<	160	<	673	<	1,339	<	527	<	1,679	

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Sample ID				
Date Sampled	Matrix	TAGM RSCO	Published Urban Fill Values ¹	Published Natural Soil Values ¹
Lab ID	Lab ID	(ug/kg)	(ug/kg)	(ug/kg)
PAH (ug/kg)				
Acenaphthene		50000	2000	500
Acenaphthylene		41000	1000	500
Anthracene		50000	4000	1000
Benzo(a)anthracene		224 or MDL	9000	2000
Benzo(a)pyrene		61 or MDL	7000	2000
Benzo(b)fluoranthene		1100	8000	2000
Benzo(g,h,i)perylene		50000	3000	1000
Benzo(k)fluoranthene		1100	4000	1000
Chrysene		400	7000	2000
Dibenzo(a,h)anthracene		14.3 or MDL	1000	500
Fluoranthene		50000	10000	4000
Fluorene		50000	2000	1000
Indeno(1,2,3-cd)pyrene		3200	3000	1000
Naphthalene		13000	1000	500
Phenanthrene		50000	20000	3000
Pyrene		50000	20000	4000
2-Methylnaphthalene		36400	1000	500
Total PAH concentration		NC	1,000 - 25,000 ²	26000
Total carcinogenic PAH concentration		NC	60-12,000 ²	10500
Total carcinogenic PAH concentration in BaP Equivalents		SB	10,110	3,030

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No data for this