

PLM and EPA Region 1 Laboratory Results
North Point Park Soil

Sieve Method Laboratory Results
North Point Park Soil

Elutriator Method Laboratory Results
North Point Park Soil

Activity-Based Laboratory Results
North Point Park Soil

Sample ID	Polarized Light Microscopy	EPA Region 1	6.3 mm Sieve			4.75 mm Sieve			2.00 mm Sieve			Total Sieve			PM10 Mass gr	Structures	s/gPM10	Estimated Residential Risk	PLM fibers/cc	TEM structures/cc	Estimated excavation/construction Risk
			Dry wt mg	Fraction wt kg	Conc. mg/kg	Dry wt mg	Fraction wt kg	Conc. mg/kg	Dry wt mg	Fraction wt kg	Conc. mg/kg	Dry wt mg	Fraction wt kg	Conc. mg/kg							
01A	Chrysotile	<1% Chrysotile	0	0.187	0	0	0.041	0	153.1	0.109	1404.6	153.1	0.925	165.51	0.00009	4	11980000	2.42233E-05	0.005	<0.0049	
02A	None Detected	<1% Chrysotile	0	0.367	0	0	0.045	0	13.5	0.156	86.5	13.5	1.339	10.08							
03A	None Detected	<1% Chrysotile	0	0.249	0	1	0.052	19.23	23.6	0.155	152.3	24.6	1.329	18.51	0.00022	1	2950000	5.96484E-06	0.017	0.0099	Chrysotile 3.86184E-06
04A	Chrysotile	None Detected	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT							
05A	Chrysotile	None Detected	0	0.13	0	0	0.03	0	9.2	0.09	102.2	9.2	0.659	13.96					0.007	<0.0049	
06A	Chrysotile	<1% Chrysotile	162	0.173	936	0	0.042	0	88.9	0.095	935.8	250.9	0.782	320.84							
07A	Chrysotile	<1% Chrysotile	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT							
08A	Chrysotile	<1% Chrysotile	105.7	0.199	531	33.5	0.039	859.0	200.6	0.124	1617.7	339.8	1.026	331.19	0.00013	4	11980000	2.42233E-05	0.006	<0.0049	
09A	None Detected	None Detected	0	0.257	0	121.6	0.046	2643.5	77	0.103	747.6	198.6	1.075	184.74	0.00016	2	5615000	1.13534E-05	0.007	<0.0049	
10A	Chrysotile	None Detected	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT							
11A	Chrysotile	<1% Chrysotile	0	0.233	0	6	0.037	162.2	113.5	0.096	1182.3	119.5	0.884	135.18							
12A	Chrysotile	None Detected	0	0.306	0	0	0.059	0	59.4	0.138	430.4	59.4	1.335	44.49	0.000122	11	32990000	6.67051E-05	0.007	0.025	Chrysotile 9.75212E-06
13A	Chrysotile	None Detected	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT							
14A	Chrysotile	None Detected	0	0.097	0	0	0.029	0	172.5	0.116	1487.1	172.5	0.896	192.52							
15A	Chrysotile	<1% Chrysotile	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT							

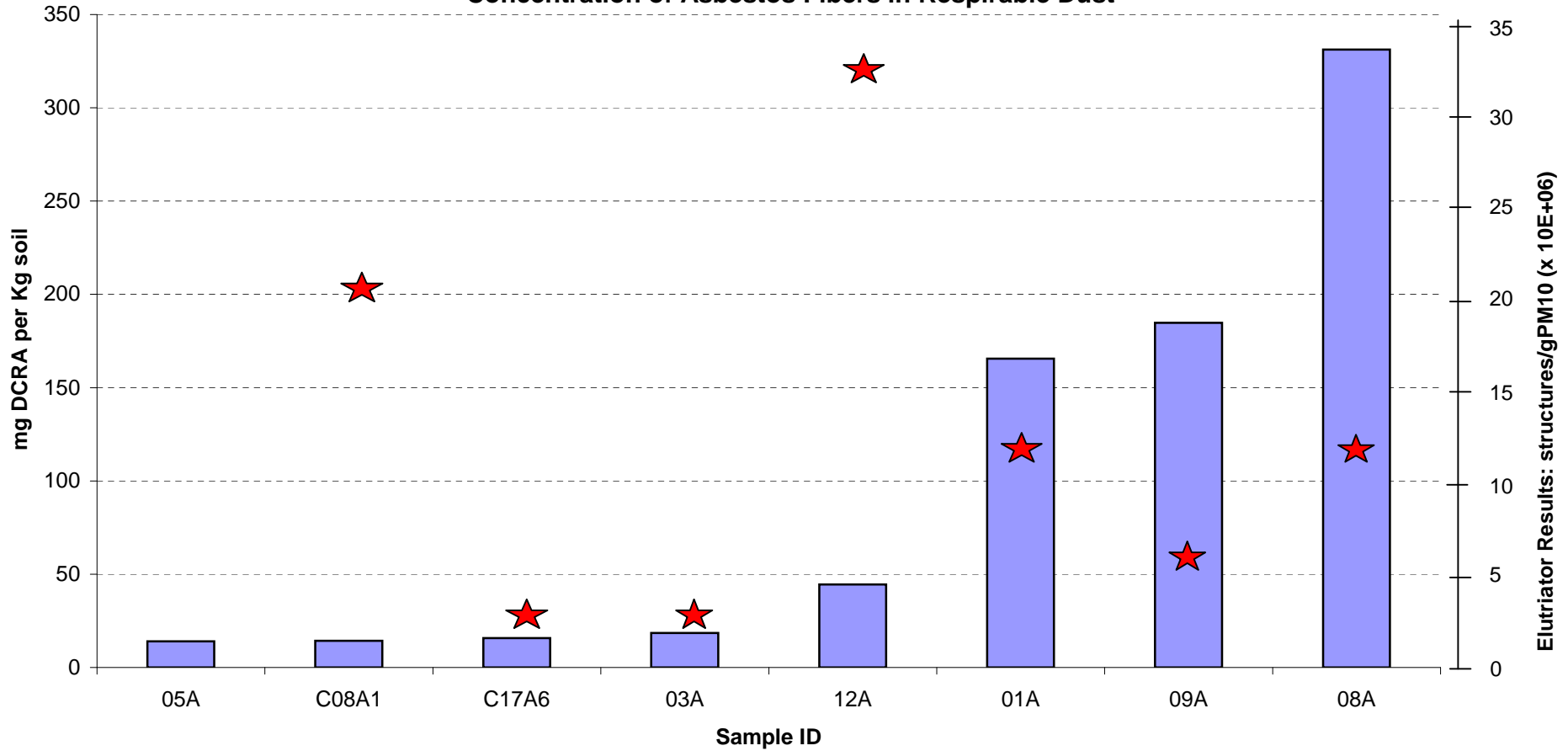
16 hr/day, 30 years exposure

8 hr/day, 130 days exposure

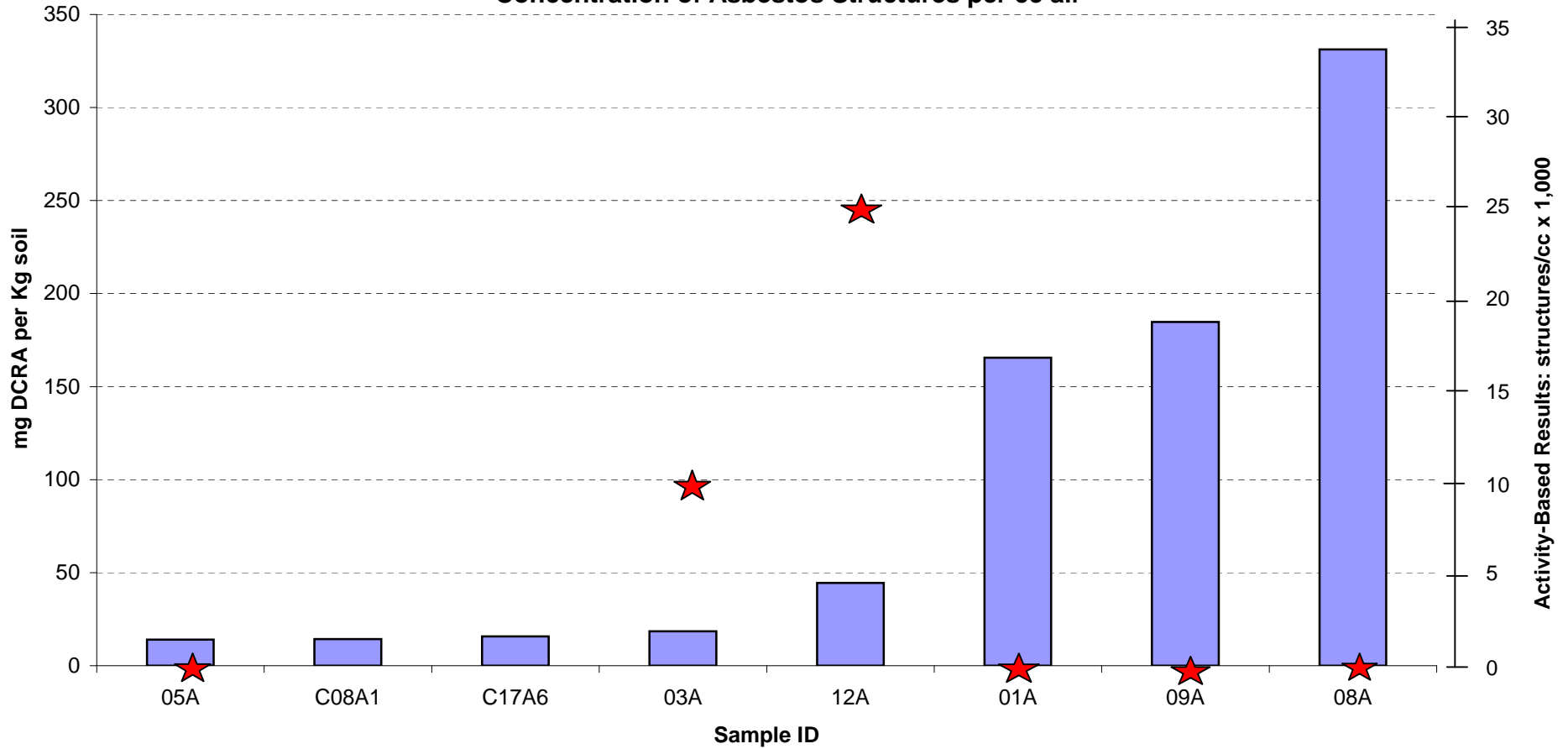
North Point Park Soil Results

	01A	02A	03A	04A	05A	06A	07A	08A	09A	10A	11A	12A	13A	14A	15A
PLM	Chrysotile	ND	ND	Chrysotile	Chrysotile	Chrysotile	Chrysotile	Chrysotile	ND	Chrysotile	Chrysotile	Chrysotile	Chrysotile	Chrysotile	Chrysotile
Region I	<1% Chrysotile	<1% Chrysotile	<1% Chrysotile	ND	ND	<1% Chrysotile	<1% Chrysotile	<1% Chrysotile	ND	ND	<1% Chrysotile	ND	ND	ND	<1% Chrysotile
Sieve: Total DCRA (mg/kg)	165.5	10.1	18.5		14		320.8	331.2	184.7		135.2	44.5		192.5	
Mass of PM10 (grams)	0.00009		0.000222					0.000129	0.000155			0.000122			
Total Structures Observed	4		1					4	2			11			
Elutriator s/gPM10	1.20E+07		2.95E+06					1.20E+07	5.62E+06			3.30E+07			
Estimated Residential Risk	2.42E-05		5.96E-06					2.42E-05	1.14E-05			6.67E-05			
Activity- PLM fibers/cc	0.005		0.017		0.007			0.006	0.007			0.007			
Activity- TEM str./cc	<0.0049		0.0099 Chrysotile		<0.0049			<0.0049	<0.0049			0.025 Chrysotile			

Sieve Analysis Results
Concentration of Debris Containing Releasable Asbestos ("DCRA")
and
Elutriator Results
Concentration of Asbestos Fibers in Respirable Dust



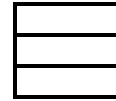
Sieve Analysis Results
Concentration of Debris Containing Releasable Asbestos ("DCRA")
and
Activity-Based Sampling Results
Concentration of Asbestos Structures per cc air



Asbestos In Soil Project
 Massachusetts Department of Environmental Protection

PLM and EPA Region 1 Laboratory Results
 North Point Park Soil

Sample ID	Polarized Light Microscopy	EPA Region 1	Total Sieve Elutriator				Risk	
			Conc. mg/kg	PM10 Mass gr	Structures	s/gPM10		
05A	Chrysotile	None Detected	13.96055					
C08A1			14.3	0.000207	7	2.05E+07	4.15E-05	2.05E+01
C17A6			15.7	0.000072	1	3.00E+06	6.07E-06	3.00E+00
03A	None Detected	<1% Chrysotile	18.51016	0.000222	1	2.95E+06	5.96E-06	2.95E+00
12A	Chrysotile	None Detected	44.49438	0.000122	11	3.30E+07	6.67E-05	3.30E+01
01A	Chrysotile	<1% Chrysotile	165.5135	0.00009	4	1.20E+07	2.42E-05	1.20E+01
09A	None Detected	None Detected	184.7442	0.000155	2	5.62E+06	1.14E-05	5.62E+00
08A	Chrysotile	<1% Chrysotile	331.1891	0.000129	4	1.20E+07	2.42E-05	1.20E+01
C09C2			ND	0.000105	0	< 3.00E+06		
02A	None Detected	<1% Chrysotile	10.08215					
11A	Chrysotile	<1% Chrysotile	135.181					
14A	Chrysotile	None Detected	192.5223					
06A	Chrysotile	<1% Chrysotile	320.844					
04A	Chrysotile	None Detected	NT					
07A	Chrysotile	<1% Chrysotile	NT					
10A	Chrysotile	None Detected	NT					
13A	Chrysotile	None Detected	NT					
15A	Chrysotile	<1% Chrysotile	NT					



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PLM and EPA Region 1 Laboratory Results
 Airport (LA-), Subaru Pier (SP-) and Stockpile BH-2 Soil

Sample Identification	Polarized Light Microscopy	EPA Region 1
BH-2- 01	None Detected	<1% Chrysotile
BH-2- 02	None Detected	<1% Chrysotile
BH-2- 04	None Detected	<1% Chrysotile
BH-2- 05	None Detected	<1% Chrysotile
BH-2- 06	None Detected	<1% Chrysotile
BH-2- 07	None Detected	<1% Chrysotile
BH-2- 08	None Detected	<1% Chrysotile
BH-2- 09	None Detected	<1% Chrysotile
BH-2- 10	None Detected	<1% Chrysotile
BH-2- 03	None Detected	None Detected
LA- 02A	Chrysotile	<1% Chrysotile
LA- 06A	Chrysotile	<1% Chrysotile
LA- 07A	Chrysotile	<1% Chrysotile
LA- 08A	Chrysotile	<1% Chrysotile
LA- 10A	Chrysotile	<1% Chrysotile
LA- 01A	None Detected	<1% Chrysotile
LA- 03A	None Detected	<1% Chrysotile
LA- 04A	None Detected	<1% Chrysotile
LA- 05A	None Detected	<1% Chrysotile
LA- 09A	None Detected	<1% Chrysotile
SP- 02A	Chrysotile	<1% Chrysotile
SP- 05A	Chrysotile	<1% Chrysotile
SP- 06A	Chrysotile	<1% Chrysotile
SP- 01A	None Detected	<1% Chrysotile
SP- 07A	None Detected	<1% Chrysotile
SP- 09A	None Detected	<1% Chrysotile
SP- 03A	None Detected	None Detected
SP- 04A	None Detected	None Detected
SP- 08A	None Detected	None Detected
SP- 10A	None Detected	None Detected

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Results of Composite Sampling
 CA/T Contracts C08A1, C09C2 and C17A6

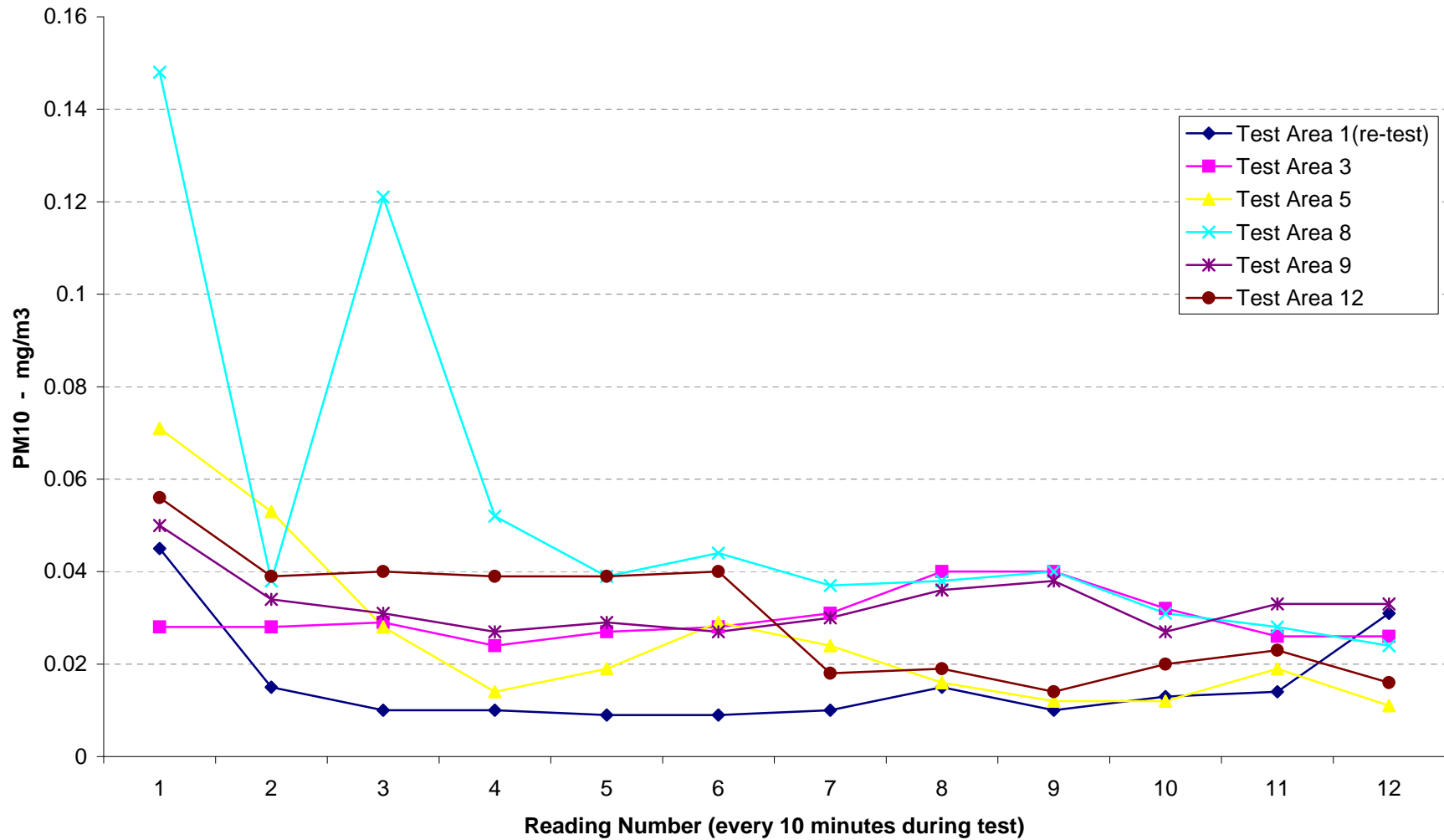
Sample Identification	Debris Containing Releaseable Asbestos in Soil		Elutriator Results		
			Mass of PM ₁₀ (g)	Total Structures Observed	s/g _{PM10}
C08A1	6.3 mm Sieve	None Detected	0.000207	7	2.05E+07
	4.75 mm Sieve	None Detected			
	2.0 mm Sieve	15.9 mg _{DCRA}			
	DCRA	14.3 mg _{DCRA} /kg _{soil}			
C09C2	6.3 mm Sieve	None Detected	0.000105	0	< 3.00E+06
	4.75 mm Sieve	None Detected			
	2.0 mm Sieve	None Detected			
	DCRA	None Detected			
C17A6	6.3 mm Sieve	None Detected	0.000072	1	3.00E+06
	4.75 mm Sieve	1.0 mg _{DCRA}			
	2.0 mm Sieve	18.3 mg _{DCRA}			
	DCRA	15.7 mg _{DCRA} /kg _{soil}			

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Phase Contrast Microscopy (PCM) and Transmission Electron Microscopy (TEM) Results
Activity-Based Sampling
North Point Park Soil

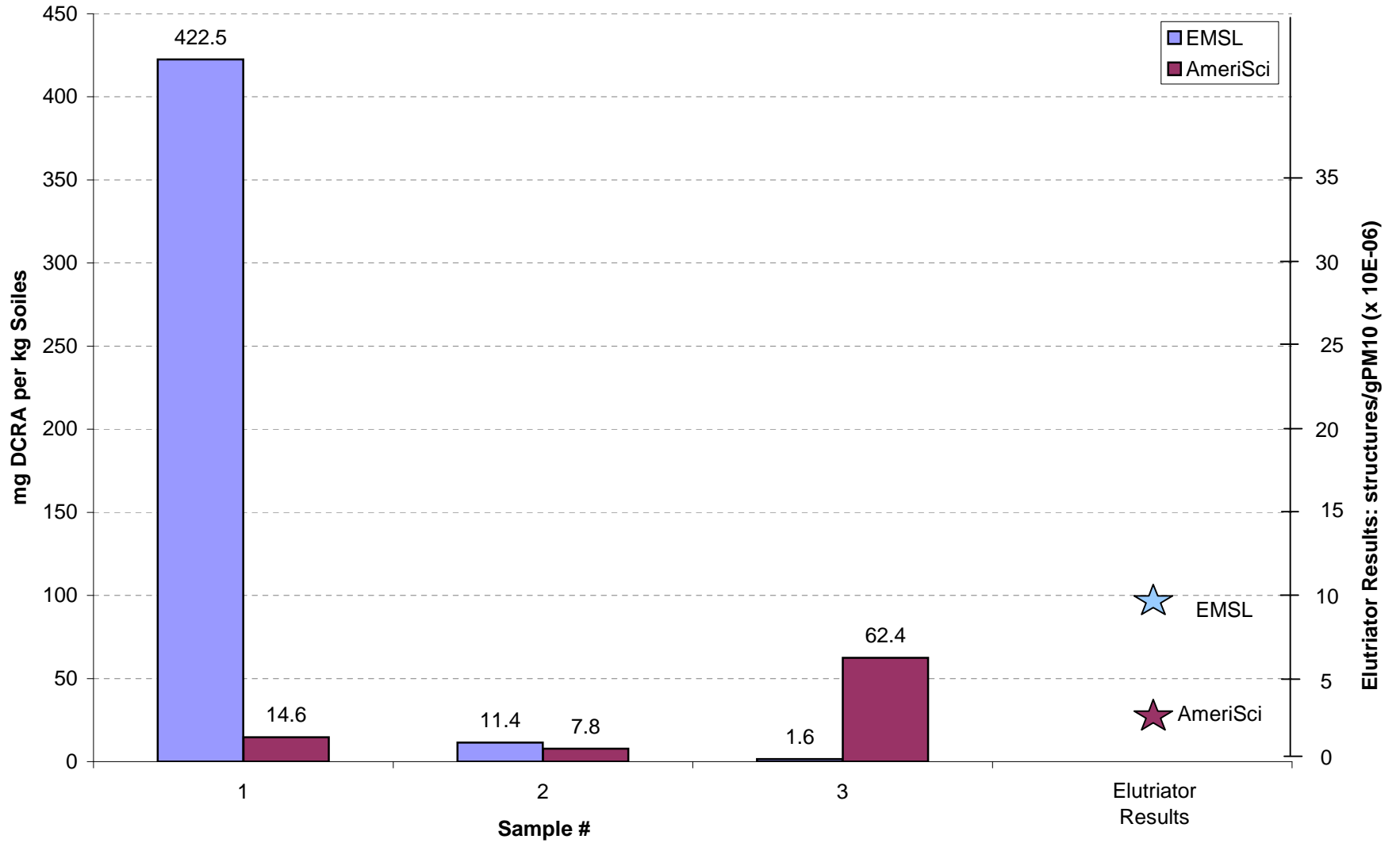
Sample Identification	PCM fibers/cc	TEM structures/cc
01	0.02	overloaded
01 (re-test)	0.005	<0.0049
03	0.017	0.0099 (Chrysotile)
05	0.007	<0.0049
08	0.006	<0.0049
09	0.007	<0.0049
12	0.007	0.025 (Chrysotile)

**PM10 Results:
Activity-Based Sampling of
North Point Park Soil (July 18-26, 2006)**



			Test Area 1(re-test)										
1	13:25	137	9:10	0.045	9:45	0.028	13:00	0.071	8:10	0.148	11:05	0.05	11:
2	13:35	92	9:20	0.015	9:55	0.028	13:10	0.053	8:20	0.038	11:15	0.034	11:
3	13:45	89	9:30	0.01	10:05	0.029	13:20	0.028	8:30	0.121	11:25	0.031	12:
4	13:55	96	9:40	0.01	10:15	0.024	13:30	0.014	8:40	0.052	11:35	0.027	12:
5	14:05	78	9:50	0.009	10:25	0.027	13:40	0.019	8:50	0.039	11:45	0.029	12:
6	14:15	76.5	10:00	0.009	10:35	0.028	13:50	0.029	9:00	0.044	11:55	0.027	12:
7	14:25	81.9	10:10	0.01	10:45	0.031	14:00	0.024	9:10	0.037	12:05	0.03	12:
8	14:35	76.7	10:20	0.015	10:55	0.04	14:10	0.016	9:20	0.038	12:15	0.036	12:
9	14:45	87.8	10:30	0.01	11:05	0.04	14:20	0.012	9:30	0.04	12:25	0.038	13:
10	14:55	93.1	10:40	0.013	11:15	0.032	14:30	0.012	9:40	0.031	12:35	0.027	13:

Results of Laboratory Split Samples



Asbestos In Soil Project
Massachusetts Department of Environmental Protection

Results of Laboratory-Split Sampling
CA/T Contract C08A1 Infield Area, East Boston

Sample Identification	Polarized Light Microscopy	EMSL Analytical, Inc.			Polarized Light Microscopy	AmeriSci				
		EPA Region I	Debris Containing Releaseable Asbestos in Soil			EPA Region I	Debris Containing Releaseable Asbestos in Soil			
1	None Detected	<1% Chrysotile	6.3 mm Sieve	349.1 mg _{DCRA}	Chrysotile	<1% Chrysotile	6.3 mm Sieve	None Detected	422.5	14.6
			4.75 mm Sieve	11.7 mg _{DCRA}			4.75 mm Sieve	None Detected		
			2.0 mm Sieve	89.2 mg _{DCRA}			2.0 mm Sieve	145.3 mg _{DCRA} /kg _{soil}		
			DCRA	422.5 mg _{DCRA} /kg _{soil}			DCRA	14.6 mg _{DCRA} /kg _{soil}		
2	None Detected	<1% Chrysotile	6.3 mm Sieve	None Detected	Chrysotile	<1% Chrysotile	6.3 mm Sieve	None Detected	11.4	7.8
			4.75 mm Sieve	1.9 mg _{DCRA}			4.75 mm Sieve	None Detected		
			2.0 mm Sieve	11.4 mg _{DCRA}			2.0 mm Sieve	96.7 mg _{DCRA} /kg _{soil}		
			DCRA	11.4 mg _{DCRA} /kg _{soil}			DCRA	7.8 mg _{DCRA} /kg _{soil}		
3	None Detected	<1% Chrysotile	6.3 mm Sieve	None Detected	Chrysotile	<1% Chrysotile	6.3 mm Sieve	329.5 mg _{DCRA} /kg _{soil}	62.4	
			4.75 mm Sieve	None Detected			4.75 mm Sieve	None Detected		
			2.0 mm Sieve	2.2 mg _{DCRA}			2.0 mm Sieve	16.9 mg _{DCRA} /kg _{soil}		
			DCRA	1.6 mg _{DCRA} /kg _{soil}			DCRA	62.4 mg _{DCRA} /kg _{soil}		
Composite Sample			Elutriator Results				Elutriator Results			
Mass of PM ₁₀ (g)			0.000166				0.000108			
Total Structures Observed			3				1			
S/g _{PM10}			8.98E+06				2.98E+06			