

**New York State Department of Labor
Public Employee Safety & Health Bureau
State Office Campus, Bldg #12, Rm 158
Albany, NY 12240**

***New York City Fire Department
Personal Exposure Monitoring
World Trade Center Site
September 26, 2001***

Employee/ Job Title	Location	Minutes Sampled	Substance Sampled	TWA Sampling Results	PESH 8-hour PEL
FDNY - I Firefighter	Barclay and West Broadway	120	Asbestos	0.022 f/cc ¹ 0.007 f/cc ²	0.1 f/cc
FDNY - II Firefighter	West St., In front of N. Tower	179	Asbestos	0.121 f/cc ¹ <0.001 f/cc ²	0.1 f/cc
FDNY - III Firefighter	West St., In front of N. Tower	184	Asbestos	0.071 f/cc ¹ 0.007 f/cc ²	0.1 f/cc
FDNY - IV Firefighter	West St., In front of N. Tower	179	Respirable Dust Respirable Quartz Silica	ND <0.174 mg/M ³ <=0.033 mg/M ³	5 mg/M ³ 0.1 mg/M ³
			% Silica	<=63	NA
FDNY - V Firefighter **	West St., In front of N. Tower	140	Total Dust Cadmium Lead Zinc Cobalt	0.252 mg/M ³ ND <0.315 ug/M ³ ND <2.0 ug/M ³ ND <0.0019 mg/M ³ ND <0.0003 mg/M ³	15 mg/M ³ 5 ug/M ³ 50 ug/M ³ 5 mg/M ³ 0.05 mg/M ³

FDNY - VI Captain **	West St., In front of N. Tower	175	Total Dust	0.261 mg/M ³	15 mg/M ³
			Cadmium	<0.251 ug/M ³	5 ug/M ³
		185	Lead	ND < 1.6 ug/M ³	50 ug/M ³
			Zinc	ND < 0.0015 mg/M ³	5 mg/M ³
			Cobalt	ND < 0.0002 mg/M ³	0.05 mg/M ³
			Carbon Monoxide	0 ppm (TWA) 22 ppm (Peak) 2 ppm (STEL)	35 ppm 200 ppm NA
FDNY - VII Firefighter	West St., In front of N. Tower	183	Carbon Monoxide	0 ppm (TWA) 28 ppm (Peak) 2 ppm (STEL)	35 ppm 200 ppm NA
Bulk #1	On Plaza, from Church St.	NA	% Silica	5.1	NA
			% Tridymite	0.10	NA
			% Asbestos	5	NA
			(Crysotile)		
Bulk # 2	Pile Near Bldg #7	NA	% Silica	23	NA
			% Cristobalite	ND < 0.01	NA
			% Asbestos	< 1	NA

f/cc = Fibers per Cubic Centimeter

TWA = Time Weighted Average

PEAK = Highest Level Seen During Test

PEL = Permissible Exposure Limit

PESH = NYS Public Employee Safety and Health Bureau

ppm = parts per million

STEL = Short Term Exposure Limit

mg/M³ = milligrams per cubic meter

ug/M³ = microgram per cubic meter

NA = Not Applicable

% = Percent

< = Less Than

<= = Less Than or Equal To

** = Metals scan also included; Aluminum, Chromium, Copper, Iron, Magnesium, Manganese, Molybdenum, and Nickel. All were below detectable levels.

Analytical Method for total dust is based on NIOSH 0600

Analytical Method for silica is based on OSHA ID142 and NIOSH 7500

Analytical Method for metals is based on OSHA ID 125G

¹ = Sample result based on analytical method NIOSH 7400. This method utilizes Phase Contrast Microscopy (PCM) which counts ALL FIBERS longer than 5 microns in length and have a length to width ratio equal to or greater than 3:1.

² = Sample result based on analytical method NIOSH 7402. This method utilizes Transmission Electron Microscopy (TEM) to identify and quantify asbestos fibers present.