

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

**New York City Police Department
Emergency Services Units
Personal Exposure Monitoring
World Trade Center Site
October 18, 2001**

Employee ID #	Location	Employee Number	Substance Monitored	PEM A - Personal Sampling Period	PEM B - Personal TWA - 15 min
CO - 1 Captain, NYC Dept. of Corrections - ESU	Search of debris - east side of N. Tower	277	dust (D) iron oxide lead cadmium	0.218 mg/m ³ 0.013 mg/m ³ ND ND	15 mg/m ³ 10 mg/m ³ 0.050 mg/m ³ (D) 0.005 mg/m ³
CO - 2 NYC Dept. of Corrections - ESU	Search of debris - east side of N. Tower	277	respirable dust respirable quartz silica % silica	ND ND ≤ 19 %	5 mg/M ³ 0.1 mg/M ³ NA
NYPD - 1 Sergeant, NYC Police Dept. - ESU	Search of debris - east side of N. Tower, bucket brigade S. Tower	331	asbestos	(D)	0.1 f/cc
NYPD - 2 NYC Police Dept. - ESU	Search of debris - east side of N. Tower, bucket brigade S. Tower	187	acrolein acetaldehyde formaldehyde phosgene	ND 0.021 ppm. 0.061 ppm. ND	0.1 ppm. 100 ppm. 0.75 ppm. 0.1 ppm.
PAP - 1 Port Authority Police Dept.	Search of debris - east side of N. Tower, bucket brigade S. Tower	365	acrolein acetaldehyde formaldehyde phosgene	ND ≤ 0.004 ppm. 0.017 ppm. ND	0.1 ppm. 100 ppm. 0.75 ppm. 0.1 ppm.

CO - 3 NYC Dept. of Corrections - ESU	Search of debris - east side of N. Tower	260	nitrogen dioxide nitric oxide carbon monoxide	≤ 0.05 ppm. 0.08 ppm. < 1 ppm. 10 ppm. (Peak)	1 ppm. (STEL) 25 ppm. 35 ppm 200 ppm ⁽⁴⁾
CO - 2 NYC Dept. of Corrections - ESU	Search of debris - east side of N. Tower	274	petroleum distillates benzene ethyl alcohol	0.013 ppm. 0.011 ppm. 0.085 ppm.	400 ppm. 1 ppm. 1000 ppm.
CO - 4 NYC Dept. of Corrections - ESU	Search of debris - east side of N. Tower	272	hydrochloric acid hydrofluoric acid nitric acid phosphoric acid sulfuric acid	ND ND ND ND 0.04 mg/m ³ ⁽⁴⁾	7 mg/m ³ (Ceiling Limit) 3 ppm. 5 mg/m ³ 1 mg/m ³ 1 mg/m ³
		568	carbon monoxide	< 1 ppm. 12 ppm. (Peak)	35 ppm 200 ppm ⁽⁴⁾

TWA = Time Weighted Average
 PEL = Permissible Exposure Limit
 PESH = NYS Public Employee Safety and Health Bureau
 f/cc = Fibers per Cubic Centimeter
 ppm = parts per million
 mg/m³ = milligrams per cubic meter
 STEL = Short Term Exposure Limit
 Peak = Highest Level Seen During Test
 ND = not detected
 NA = not Applicable
 % = Percent
 < = Less Than
 $\leq$ = Less Than or Equal To

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 - Metals scan also included; aluminum, chromium, copper, magnesium, manganese, molybdenum, nickel, and zinc.
- ² = The Action Level for lead is 0.030 mg/m³
- ³ = Cassette sample was overloaded with particulate material for the purpose of PCM or TEM analysis
- ⁴ = The Ceiling Limit for carbon monoxide is to be measured over a 5 minute sample.
- ⁵ = Results may include soluble non-sulfuric acid sulfate salts