

New York State Department of Labor Division of Safety and Health

Sampling Summary as of 3/22/02

Personal exposure sampling has been performed on numerous employees working on and around the WTC site. This has included firefighters, police officers, state troopers, corrections officers, police detectives, and sanitation workers. The New York State Department of Labor has to date collected over 350 personal exposure samples on public employees working at the site. Over 2500 analyses have been obtained on personal, area, bulk, and grab samples. The sampling summary below is for activity up to 3/12/2002.

Asbestos Over 50 personal samples have been collected so far with results ranging from not detectable to 0.116 fibers per cc by PCM analysis. The use of TEM on 2 samples which initially were above the PEL of 0.1 fibers per cc resulted in a reduction to at least 0.016 fibers per cc. Most results by PCM analysis have been well below the PEL of 0.1 fibers /cc.

Bulk wipe samples were collected in FDNY vehicles during the months of January and February to assist the department with an evaluation of contamination. All of these samples had results which were below the detection limit.

Carbon Monoxide Results for 44 personal exposure samples ranged from 0 to 12 ppm as a time weighted average, well below the PESH PEL of 35 ppm. Peak measurements reached 97 ppm on a personal monitor, still well below the ceiling limit of 200 ppm.

Silica Personal sampling results have shown most exposures to be below the detection limit for respirable silica with all exposures well below the PESH PEL of 0.1 mg/m³

Metals Personal samples (42) collected show all exposures to be below the PESH PELs. Metals analyzed included lead, copper, manganese, molybdenum, magnesium, cadmium, nickel, iron, aluminum, zinc, and cobalt.

Surface wipe samples in some of the FDNY's response vehicles were taken to assist the department with an evaluation of contamination of vehicles which had responded to the WTC site during the first few days of the disaster. These results are included in the data spreadsheet.

Volatile organics All personal sampling results have been well below PESH limits for 32 samples collected for volatile organics. These samples included analyses for the following: acetone, benzene, ethyl benzene, butyl alcohol, isopropyl alcohol, naphtha, styrene, toluene, and xylene.

Acid gases Exposures to acid gases such as hydrogen bromide, hydrogen chloride,

hydrogen cyanide, and hydrogen fluoride were all below the detection limit. For sulfuric acid, the highest exposure found was in mid October and was at a level of 0.48 mg/m³, less than half of the limit of 1 mg/m³

PCBs	The two personal exposure samples for PCBs on workers monitoring the debris pile had results which were less than the detection limits.
Mercury	All 43 personal air samples for mercury have had results which were less than the detection limit. Out of 22 wipe samples for mercury on FDNY vehicles, 21 were below the detection limit and the only positive result was a trace amount of 0.37 ug/100 cm ²
Noise	Personal monitoring for noise exposure on public employees did not reveal any exposures above the action level 85 dBA. The highest exposure recorded was 83.6 dBA as an 8 hour time weighted average.
Total dust	Of 53 personal samples were collected for total dust, only two were above the PEL of 15 mg/m ³ . These two samples were taken on workers actively looking through the debris and they were wearing respirators.
Respirable dust	There have been 34 personal samples for respirable dust collected . None of the samples have approached the PEL of 5 mg/m ³ .