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WTC Sampling Results
(Personal Air Monitoring)

**New York State Department of Labor
Division of Safety and Health**

Sampling Summary as of 12/18/2001

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 150 personal exposure samples on public employees working at the site with over 900 analyses performed. The sampling summary below is for activity up to 12/7/2001.

- Asbestos** Over 30 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 the 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.
- Carbon Monoxide** Results have ranged from 0 to 11 ppm as a time weighted average, still below the PESH PEL of 35 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 collected over the last month show all exposures to be below the PESH PELs. Metals analyzed included lead, copper, manganese, molybdenum, magnesium, cadmium, nickel, iron, aluminum, zinc, and cobalt.
- Volatile organics** All personal sampling results have been well below PESH limits for 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 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.
- Dioxins and PAHs** Results pending