

VOCs - Sampling for volatile organic compounds (VOCs) was conducted October 26 through October 28 in the direct area of the debris pile at ground zero. On each of the three days, benzene exceeded the OSHA time-weighted permissible exposure level at two locations. On October 26 five samples were collected and analyzed for Freon-22 (chlorodifluoromethane), Freon-22 was not detected in these samples. Freon-22 was detected and confirmed in samples collected from within the debris pile of the North Tower and in the debris pile of the South Tower, both at ground level, in samples collected on October 27 and within the debris pile of the North Tower on October 28, also at ground level. Levels detected were well below the NIOSH recommended exposure limit of 1,000 parts per million (ppm). EPA is working with the local agencies and health and safety officers working at ground zero to closely monitor this situation so that workers can take appropriate precautions.

PM 2.5 - Monitoring for fine particulate matter (particles less than 2.5 micrometers in diameter) was conducted October 26 through October 27 at Pace University, the Borough of Manhattan Community College, the U.S. Coast Guard building located in Battery Park and Albany Street at Battery Park City. All 24-hour average values were below the National Ambient Air Quality Standard (NAAQS) of 65 ug/m³ for all stations. These results were also less than 40 ug/m³, a level on the EPA Air Quality Index that indicates when air quality is unhealthy for sensitive populations (e.g., those with respiratory illnesses).

Direct Air Readings - Using portable monitors, direct air readings were taken in and around ground zero on October 27 and October 28. Several carbon monoxide readings were detected above the National Ambient Air Quality Standard (NAAQS) 8-hour average of 9 ppm during the early afternoon on October 27 and during the late morning on October 28; however the readings were below the NAAQS 1-hour average of 35 ppm and the OSHA permissible level of 50 ppm.

Silicates - Ten samples were collected on October 11 and analyzed for silicates. No silicates were detected in these samples. An additional 10 samples were collected on October 18; silicates were either not detected or were detected at levels below the NIOSH Recommended Exposure Limit (REL) time-weighted average of 0.05 mg/m³.

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[US Department of Labor's Occupational Safety and Health Administration](#)

[New York City Department of Health](#)

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[New York State Emergency Management Office](#)

EPA information about the events of September 11