

World Trade Center Disaster Response Air Monitoring Data Summaries

The U.S. Environmental Protection Agency (EPA) and other federal, state and local agencies have collected extensive environmental monitoring data from the World Trade Center site and nearby areas in Manhattan, Brooklyn and New Jersey. Since September 11, 2001, EPA has taken samples of the air, dust, water, river sediments and drinking water and analyzed them for the presence of pollutants that might pose a health risk to response workers at the World Trade Center site and the public. The samples are evaluated against a variety of benchmarks, standards and guidelines established to protect public health under various conditions. EPA is collecting data from more than 20 fixed air monitors in and around ground zero, regional monitors in the Bronx, Brooklyn, Queens and Staten Island, and more than 20 fixed air monitors at the Staten Island Landfill, where debris from the search and recovery and excavation operations is sifted for evidence and to identify victims.

This document summarizes measurements taken of many air pollutants by the Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (NYSDEC) in response to the World Trade Center Disaster. The summaries reflect data that had been processed and validated through May 29, 2002; dates included in each chart reflect the date of the last validated result for each parameter. Additional information about World Trade Center monitoring is available on the web at <http://www.epa.gov/wtc>

The following list provides the labels for the monitoring sites in the maps provided with each summary. The sites fall into three broad categories: World Trade Center Area, Staten Island Landfill, and Regional.

WTC Area Monitoring

<u>Name</u>	<u>Map Label</u>
Location A - Barclay St & West Broadway	A
Location B - Church St & Dey St	B
Location C - Liberty St & Trinity St	C
Location C1 - Broadway & Liberty St	C1
Location D - Albany St & Greenwich St	D
Location E - Liberty St & South End Ave	E
Location F - Vesey St & West St	F
Location G - Church St & Duane St	G
Location H - Chase Manhattan Plaza	H
Location I - Broadway & Wall St	I
Location J - Warren & West St	J
Location K - Albany & West St	K
Location L - North Side of Stuyvesant High	L
Location M - Harrison St & West St	M
Location N - Pier 25, Southside	N
Location P - Albany St & South End Ave	P
Location Q - Barclay St. & West St.	Q
Location R - EPA TAGA Bus	R
Location S - Rector Pl & South End Ave.	S
Location T - Pier 6 Heliport	T
Location U - Pier 6 Exit 2	U
Location V - Pier 6 Bus Sign	V
Location W - Wash Tent, Common Area	W
Church St & Vesey St	Church & Vesey St.
WTC - Austin Tobin Plaza - Work Zone Location 2	WTC - Austin Tobin Plz

WTC - Building 5 SW
 WTC - North Tower Center
 WTC - South Tower (Location 1)

WTC - Bldg. 5
 WTC - North Center
 WTC - South Tower

Staten Island Landfill Monitoring

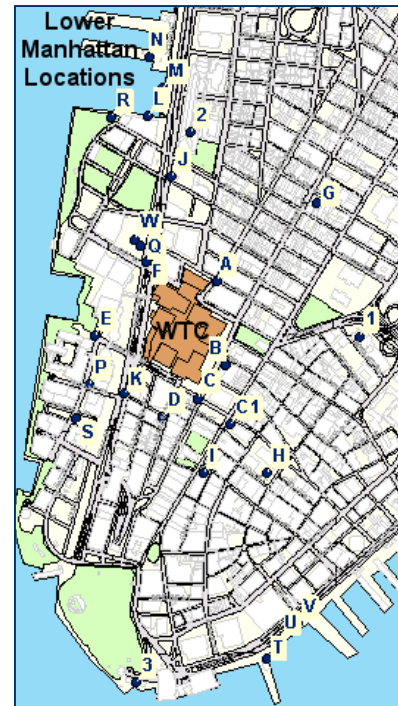
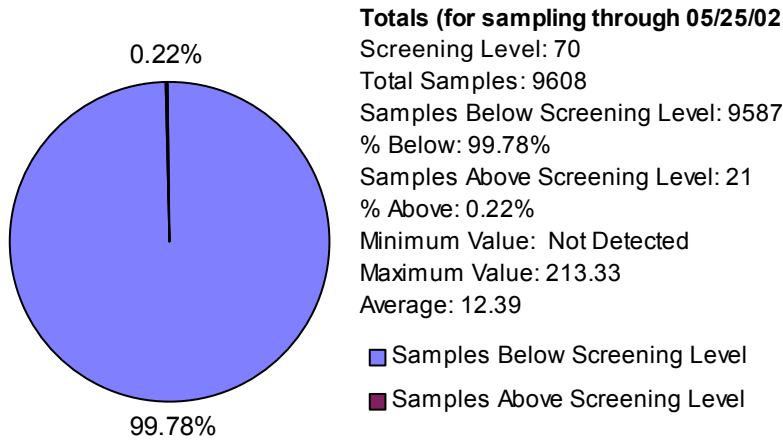
<u>Name</u>	<u>Map Label</u>
Landfill - Location 01	1
Landfill - Location 02	2
Landfill - Location 03	3
Landfill - Location 04	4
Landfill - Location 05	5
Landfill - Location 06	6
Landfill - Location 07	7
Landfill - Location 08	8
Landfill - Location 09-A (screening ops)	9A
Landfill - Location 09-B (screening ops)	9B
Landfill - Location 09-C (screening ops)	9C
Landfill - Location 10-A (screening ops)	10A
Landfill - Location 10-B (screening ops)	10B
Landfill - Location 11	11
Landfill - Locations 12A, 12B & 12C	12ABC
Landfill - Location 13	13
Landfill - Location 14	14
Landfill - Location 15 (Mess Tent)	15
Landfill - Location 16 (Supply Tent)	16
Landfill - Location 17 (Off-site)	17
Landfill - Location 18 (Off-site)	18
Landfill - Location 19 (Off-site)	19
Landfill - Location 20 - MPHS	20

Regional Monitoring

<u>Name</u>	<u>Map Label</u>
New Jersey - CITGO Linden	CITGO Linden
New Jersey - FMC Carteret	FMC Carteret
New Jersey - SHELL Sewarren	Shell Sewarren
Site 01 - Park Row	1
Site 02 - Chambers Street	2
Site 03 - Coast Guard Building Battery Park	3
Site 04 - Canal Street Post Office	4
Site 05 - Public School 154 - 333 East 135 St	5
Site 06 - Intermediate School 143 - 511 West 182 St	6
Site 07 - Public School 274 - 800 Bushwick Avenue	7
Site 08 - Public School 44 - 80 Maple Parkway Staten Island	8
Site 09 - Public School 199 - 3290 48th Ave	9
Site 10 - Liberty State Park, NJ	10
Site 14 - Albany St., Battery Park City	14
Site 16 - 290 Broadway	16

For additional information on World Trade Center Monitoring, see <http://www.epa.gov/wtc/>
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Asbestos Air Monitoring Data Summary for Lower Manhattan WTC Sampling



In evaluating data from the World Trade Center and the surrounding areas, EPA is using a protective standard under AHERA, the Asbestos Hazard Emergency

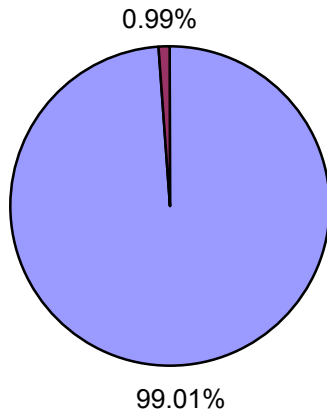
Response Act, to evaluate the risk from asbestos in the outdoor and indoor air. This is a very stringent standard that is used to determine whether children may re-enter a school building after asbestos has been removed or abated. It is based on assumptions of long-term exposure. EPA has chosen to use this standard because it is the most stringent and protective, even though it is unlikely that the public will be exposed to asbestos from the World Trade Center site for extended periods of time.

To determine asbestos levels, air filters are collected from monitoring equipment through which air in the school building has passed and viewed through a microscope. The number of structures – material that has asbestos fibers on or in it – is then counted. The measurements must be 70 or fewer structures per square millimeter before children are allowed inside.

There is also a federal standard for asbestos exposure under OSHA, the Occupational Safety and Health Act, which is used to protect workers on-the-job. The standard is .1 fiber per cubic centimeter averaged over an eight-hour day. To be as protective as possible, EPA is using the school re-entry standard in tests around the World Trade Center.

Levels above 70 structures per square millimeter do NOT imply an immediate health threat. Asbestos exposure becomes a health concern when high concentrations of asbestos fibers are inhaled over a long period. Illness is very unlikely to result from a single, high-level exposure, or from a short period of exposure to lower levels.

Asbestos Air Monitoring Data Summary for Staten Island Landfill WTC Sampling



Totals (for sampling through 05/16/02, in $\mu\text{g}/\text{m}^3$)

Screening Level: 70
 Total Samples: 5263
 Samples Below Screening Level: 5211
 % Below: 99.01%
 Samples Above Screening Level: 52
 % Above: 0.99%
 Minimum Value: Not Detected
 Maximum Value: 275.56
 Average: 12.89

■ Samples Below Screening Level
 ■ Samples Above Screening Level



In evaluating data from the World Trade Center and the surrounding areas, EPA is using a protective standard under AHERA, the Asbestos Hazard Emergency Response Act, to evaluate the risk from asbestos in the outdoor and indoor air. This is a very stringent standard that is used to determine whether children may re-enter a school building after asbestos has been removed or abated. It is based on assumptions of long-term exposure. EPA has chosen to use this standard because it is the

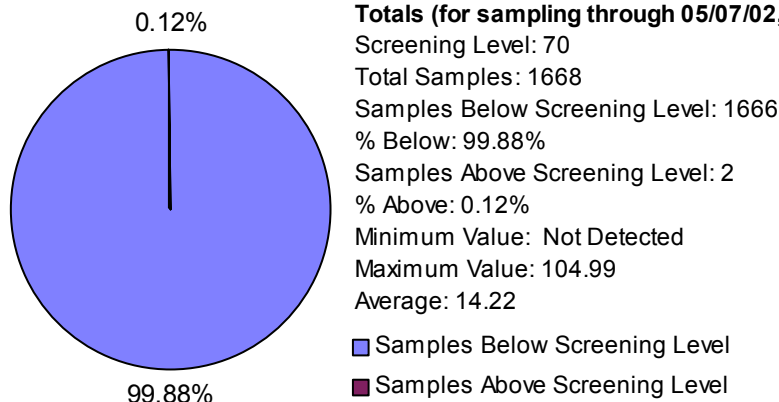
most stringent and protective, even though it is unlikely that the public will be exposed to asbestos from the World Trade Center site for extended periods of time.

To determine asbestos levels, air filters are collected from monitoring equipment through which air in the school building has passed and viewed through a microscope. The number of structures – material that has asbestos fibers on or in it – is then counted. The measurements must be 70 or fewer structures per square millimeter before children are allowed inside.

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Asbestos Air Monitoring Data Summary for Regional WTC Sampling



In evaluating data from the World Trade Center and the surrounding areas, EPA is using a protective standard under AHERA, the Asbestos Hazard Emergency Response Act, to evaluate the risk from asbestos in the outdoor and indoor air. This is a very stringent standard that is used to determine whether children may re-enter a school building after asbestos has been removed or abated. It is based on assumptions of long-term exposure. EPA has chosen to use this standard because it is the most stringent and protective, even though it is unlikely that the public will be exposed to asbestos from the World Trade Center site for extended periods of time.

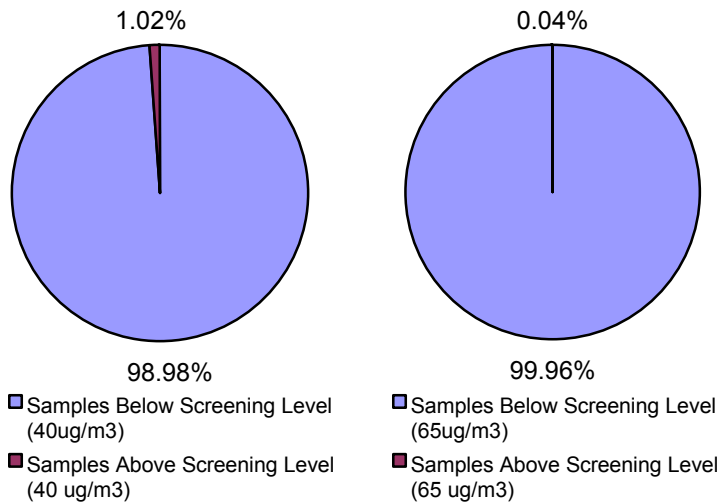
To determine asbestos levels, air filters are collected from monitoring equipment through which air in the school building has passed and viewed through a microscope. The number of structures – material that has asbestos fibers on or in it – is then counted. The measurements

must be 70 or fewer structures per square millimeter before children are allowed inside.

There is also a federal standard for asbestos exposure under OSHA, the Occupational Safety and Health Act, which is used to protect workers on-the-job. The standard is .1 fiber per cubic centimeter averaged over an eight-hour day. To be as protective as possible, EPA is using the school re-entry standard in tests around the World Trade Center.

Levels above 70 structures per square millimeter do NOT imply an immediate health threat. Asbestos exposure becomes a health concern when high concentrations of asbestos fibers are inhaled over a long period. Illness is very unlikely to result from a single, high-level exposure, or from a short period of exposure to lower levels.

PM 2.5 Air Monitoring Data Summary for NYC WTC Sampling



Totals (for sampling through 05/15/02, in ug/m3)
 Screening Levels: 40 & 65
 Total Samples: 91,305
 Samples Below Screening Level (40ug/m3): 90,370
 % Below (40 ug/m3): 98.98
 Samples Below Screening Level (65ug/m3): 91,272
 % Below (65 ug/m3): 99.96
 Samples Above Screening Level (40 ug/m3): 935
 % Above (40 ug/m3): 1.02
 Samples Above Screening Level (65 ug/m3): 33.00
 % Above (65 ug/m3): 0.04
 Minimum Value: -50.04
 Maximum Value: 165.63
 Average: 13.47



These values show how much fine particulate matter (particles less than 2.5 micrometers in diameter) the New York State Department of Environmental Conservation has measured in the air at this site, on the dates and times shown. Daily summaries of these measurements (http://www.epa.gov/wtc/data_summary.htm) and how they compare to the screening level for public health are also available.

Airborne particles like smoke and dust are solids and liquid droplets of different sizes suspended in the air. EPA sets the screening level to caution sensitive groups, including children, the elderly, and people with heart or lung disease. For fine particles, that level is 40 ug/m3* (the mass of fine particles in micrograms (a millionth of a gram) in a cubic meter of air) for 24-hour average exposure. This level is based on EPA's Air Quality Index. Above this level, we

recommend that sensitive groups reduce their exposure. Shorter term peaks are also of potential concern for sensitive groups. The screening level for the general population is 65 ug/m3 over a 24 hour period. Most healthy adults and children are expected to recover quickly from any symptoms of short-term exposure like coughing, wheezing, or eye and throat irritation. EPA expects the long-term risk from these short-term exposures to be low.

There are two methods for measuring particulate matter (PM) being used at the monitoring sites presented on the EPA website.

The filter method is based on ambient air being drawn through a filter which traps particles. This provides a 24-hour integrated sample. After the sample is taken, the filter is collected, weighed in a laboratory, and recorded by laboratory staff. This is the method that is being used for PM10 monitoring at the Park Row, Chambers Street, and Coast Guard sites.

The continuous method is based on ambient air being drawn into a chamber to be analyzed mechanically and the recorded electronically. We have installed continuous monitors for PM 2.5 at all of the sites in lower Manhattan. We also have continuous monitors for PM10 at the Albany Street and Wall Street sites.

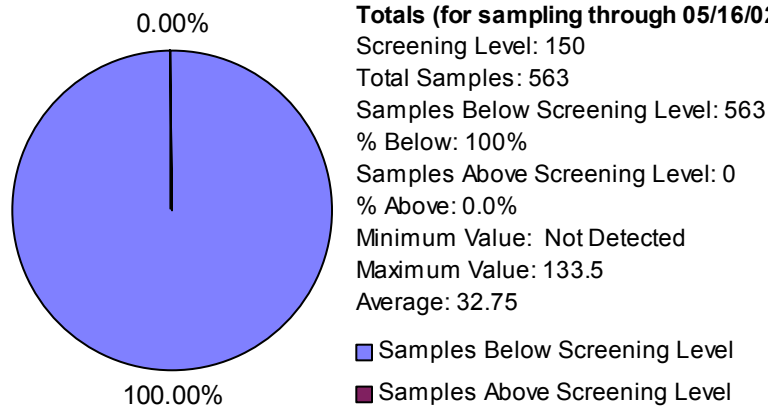
The primary difference between filter and continuous methods is that the continuous monitors report hourly-average concentrations and a daily average of the 24 one-hour averages, while the filter-based monitors provide one 24-hour average concentration.

See the Particulate Matter Fact Sheet (http://www.epa.gov/wtc/pm10/pm_fact_sheet.html) for more information about particulate matter and how to reduce your exposure.

* The unit, ug/m³, is the mass of fine particles in micrograms (a millionth of a gram) in a cubic meter of air.

** Viewers of this data are advised that changes in atmospheric conditions, particularly humidity, can affect reported hourly particulate concentrations. Changes in humidity can increase or decrease reported concentrations and in the extreme, result in negative reported values. While these effects do not invalidate daily average concentrations, viewers are cautioned that hour to hour comparisons may not always be appropriate.

PM 10 Air Monitoring Data Summary for NYC WTC Sampling



Particles in the air can be different sizes; when smaller than 10 micrometers in diameter, they can be inhaled into the lungs. These particles, also called "PM10," include both fine smoke and coarse dust ("coarse" dust particles are between 2.5 and 10 micrometers in diameter). EPA sets the screening level for PM10 to caution sensitive groups, including children, the elderly, and people with heart or lung disease, about exposures to coarse dust particles. The PM10 screening level for sensitive groups is 150 ug/m³* (the mass of coarse particles in micrograms - a millionth of a gram - in a cubic meter of air) for 24-hour average exposure. This level is based on EPA's Air Quality Index. Above this level, we recommend that sensitive groups reduce their exposure. Most healthy adults, children and the elderly are expected to recover quickly from any symptoms of short-term exposure like coughing, wheezing, or eye or throat irritation. EPA expects the long-term risks from these short-term exposures to be low.

There are two methods for measuring particulate matter (PM) being used at the monitoring sites presented on the EPA website.

The filter method is based on ambient air being drawn through a filter which traps particles. This provides a 24-hour integrated sample. After the sample is taken, the filter is collected, weighed in a laboratory, and

recorded by laboratory staff. This is the method that is being used for PM10 monitoring at the Park Row, Chambers Street, and Coast Guard sites.

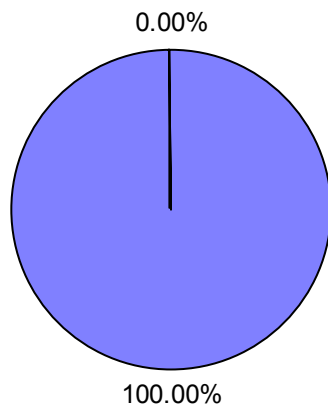
The continuous method is based on ambient air being drawn into a chamber to be analyzed mechanically and the recorded electronically. We have installed continuous monitors for PM 2.5 at all of the sites in lower Manhattan. We also have continuous monitors for PM10 at the Albany Street and Wall Street sites.

The primary difference between filter and continuous methods is that the continuous monitors report hourly-average concentrations and a daily average of the 24 one-hour averages, while the filter-based monitors provide one 24-hour average concentration. Particles in the air can be different sizes; when smaller than 10 micrometers in diameter, they can be inhaled into the lungs.

See the Particulate Matter Fact Sheet (http://www.epa.gov/wtc/pm10/pm_fact_sheet.html) for more information about particulate matter and how to reduce your exposure.

* The unit, ug/m³, is the mass of coarse particles in micrograms (a millionth of a gram) in a cubic meter of air.

PCBs Air Monitoring Data Summary for Lower Manhattan WTC Sampling



Totals (for sampling through 04/24/02, in ng/m³)

Screening Level: 730

Total Samples: 539

Samples Below Screening Level: 539

% Below: 100.00%

Samples Above Screening Level: 0

% Above: 0.00%

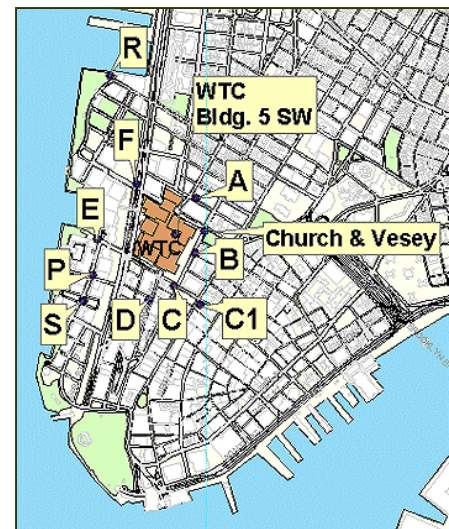
Minimum Value: Not Detected

Maximum Value: 153

Average: 2.58

■ Samples Below Screening Level

■ Samples Above Screening Level



Polychlorinated biphenyls, or "PCBs", have been used as coolants and lubricants in transformers, capacitors, and other electrical equipment because they are good insulators. The manufacture of PCBs was stopped in the U.S. in 1977 because of evidence they build up in the environment and can cause harmful health problems. Products made before 1977 that may contain

PCBs include old fluorescent lighting fixtures, electrical devices containing PCB capacitors, and old hydraulic oils.

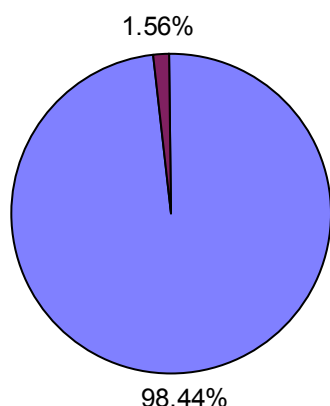
To date, all measurements of airborne PCBs at sites surrounding the WTC work zone have been below EPA's screening level. The EPA screening level is set well below exposure levels shown to cause cancer in animals, as well as those associated with any other health effects. The screening level is based on continuous exposure for a year to an average concentration of 730 ng/m³*. Because measured PCB

levels to date have been significantly lower, we do not expect increased risks of health problems as a result of PCBs from the WTC site.

The EPA screening level is set well below exposure levels shown to cause cancer in animals, as well as those associated with any other health effects.

* The unit, ng/m³, is the mass of PCBs in nanograms (a billionth of a gram) in a cubic meter of air.

Lead Air Monitoring Data Summary for Lower Manhattan WTC Sampling



Totals (for sampling through 02/05/02, in ug/m3)

Screening Level: 1.5

Total Samples: 321

Samples Below Screening Level: 316

% Below: 98.44%

Samples Above Screening Level: 5

% Above: 1.56%

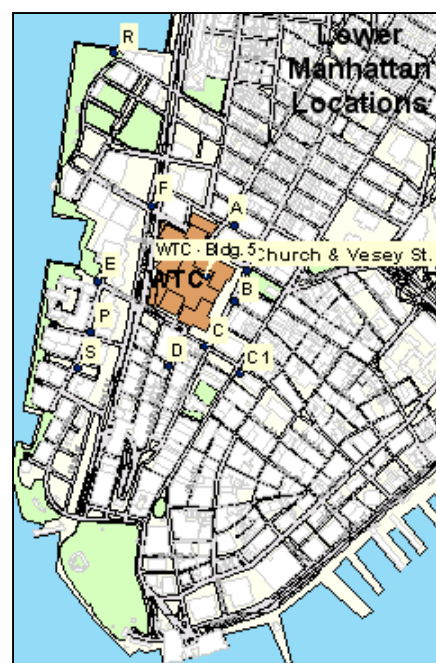
Minimum Value: Not Detected

Maximum Value: 5.4

Average: 0.17

■ Samples Below Screening Level

■ Samples Above Screening Level



Most of the lead in our air used to come from vehicles using leaded gasoline. However, EPA eliminated the use of leaded gasoline and lead levels in outdoor air and in much of the population have declined

dramatically. Today, metal processing, refining and recycling facilities are the major source of lead in the air. Children under the age of seven are at the greatest risk from lead poisoning and their primary exposure is from leaded-paint dust and chips in older housing.

EPA has established an air quality standard for lead of 1.5 ug/m3*, averaged over a three month period. This is based primarily on how long-term exposure to lead affects the most sensitive population (including children). The values given below are for short-term (e.g., 12-hour) measurements. In the first weeks of the cleanup effort, some short-term lead measurements were higher than this standard; however, the standard is based on a three month average and we expect that the concentrations will continue to drop

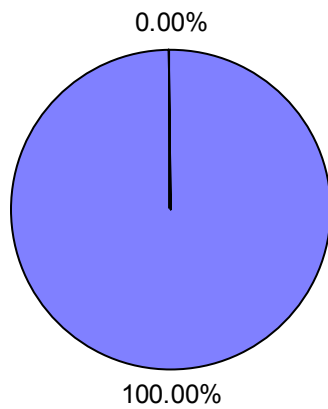
For additional information on World Trade Center Monitoring, see <http://www.epa.gov/wtc/>

Created on 6/4/02

as the cleanup continues. EPA does not expect people to have increased risks of health problems due to lead exposure from the World Trade Center cleanup effort.

* The unit, ug/m³, is the mass of lead in micrograms (a millionth of a gram) in a cubic meter of air.

Lead Air Monitoring Data Summary for Staten Island Landfill WTC Sampling



Totals (for sampling through 04/12/02, in ug/m3)

Screening Level: 1.5
 Total Samples: 101
 Samples Below Screening Level: 101
 % Below: 100.00%
 Samples Above Screening Level: 0
 % Above: 0.00%
 Minimum Value: Not Detected
 Maximum Value: 0.42
 Average: 0.04

- Samples Below Screening Level
- Samples Above Screening Level

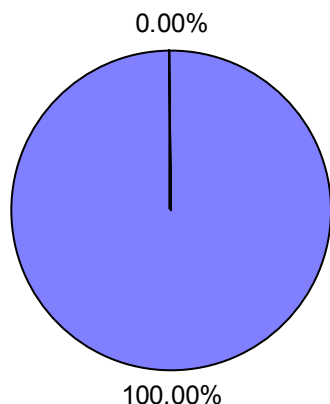


Most of the lead in our air used to come from vehicles using leaded gasoline. However, EPA eliminated the use of leaded gasoline and lead levels in outdoor air and in much of the population have declined dramatically. Today, metal processing, refining and recycling facilities are the major source of lead in the air. Children under the age of seven are at the greatest risk from lead poisoning and their primary exposure is from lead-paint dust and chips in older housing.

EPA has established an air quality standard for lead of 1.5 ug/m³*, averaged over a three month period. This is based primarily on how long-term exposure to lead affects the most sensitive population (including children). The values given below are for short-term (e.g., 12-hour) measurements. In the first weeks of the cleanup effort, some short-term lead measurements were higher than this standard; however, the standard is based on a three month average and we expect that the concentrations will continue to drop as the cleanup continues. EPA does not expect people to have increased risks of health problems due to lead exposure from the World Trade Center cleanup effort.

* The unit, ug/m³, is the mass of lead in micrograms (a millionth of a gram) in a cubic meter of air.

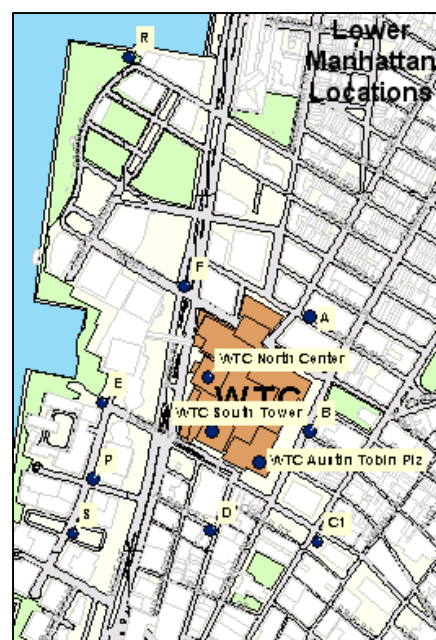
Benzene Full-Day Air Monitoring Data Summary for Lower Manhattan WTC Sampling



Totals (for sampling through 12/17/02, in ppb)

Screening Level: 20
 Total Samples: 25
 Samples Below Screening Level: 25
 % Below: 100.00%
 Samples Above Screening Level: 0
 % Above: 0.00%
 Minimum Value: Not Detected
 Maximum Value: 5.6
 Average: 1.45

- Samples Below Screening Level
- Samples Above Screening Level



Benzene is a Volatile Organic Compound, or VOC, found in emissions from burning coal, oil and gasoline and in evaporation at gasoline service stations. These and other sources all contribute to the

baseline level of benzene found in outdoor air. Benzene is also released from tobacco smoke.

Benzene levels in urban areas like New York City fluctuate widely, across locations (near idling cars or trucks vs. on the waterfront) and across time (rush hour vs. middle of the night). Routine monitoring involves sampling over a 24-hour period to obtain an average concentration during that day.

Data from routine monitoring sites in New York City collected prior to September 11 find some 24-hour average samples ranging up to approximately 4 parts per billion (ppb). In response to these urban area

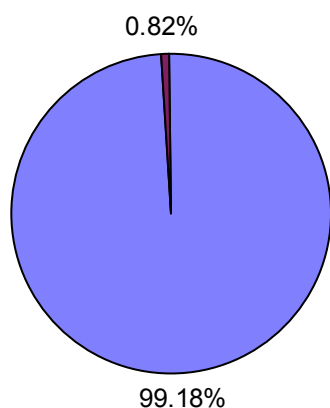
levels, EPA has adopted several programs to reduce benzene emissions from large urban sources such as motor vehicles. More information on these programs can be found at www.epa.gov/otaq.

Measurements of benzene from World Trade Center smoke and associated cleanup activities (vehicles and equipment) include background levels from other more routine sources such as city traffic. Nearly all of these measurements were "grab" samples, lasting but a few minutes; they are intended to quickly compare levels at the work site with those found in the surrounding streets.

To protect workers at the site, EPA attempts to identify the highest concentration levels of benzene by taking grab samples where smoke plumes have been sighted at the work site. Some of the results have been dramatically higher (up to 4000 times) than those taken in the surrounding streets. EPA has urged workers to wear respirators and other protective gear, which the Agency and others have provided. Used properly, respirators can protect workers from exposure to benzene and other contaminants at the levels we have found.

Benzene dissipates quickly and grab samples outside the work zone have been drastically lower, indicating dramatic drop-offs in levels as you move away from the debris pile. Full day air samples have also been taken at eight sites, mainly along the outer edge of the work zone. These measurements, which are comparable to levels seen prior to September 11 in New York City, confirm the rapid dissipation of benzene as you move away from the debris pile and illustrate that over a full day, average levels are much lower than many of the levels captured in the few minute grab samples. These full day air samples are all below EPA's screening level which was set to be protective against significantly increased risks of cancer and other adverse health effects. This screening level assumes continuous exposure for a year to an average concentration of 20 ppb.

Dioxin Air Monitoring Data Summary for Lower Manhattan WTC Sampling



Totals (for sampling through 04/24/02, in ng/m3)

Screening Level: 0.16

Total Samples: 613

Samples Below Screening Level: 608

% Below: 99.18%

Samples Above Screening Level: 5

% Above: 0.82%

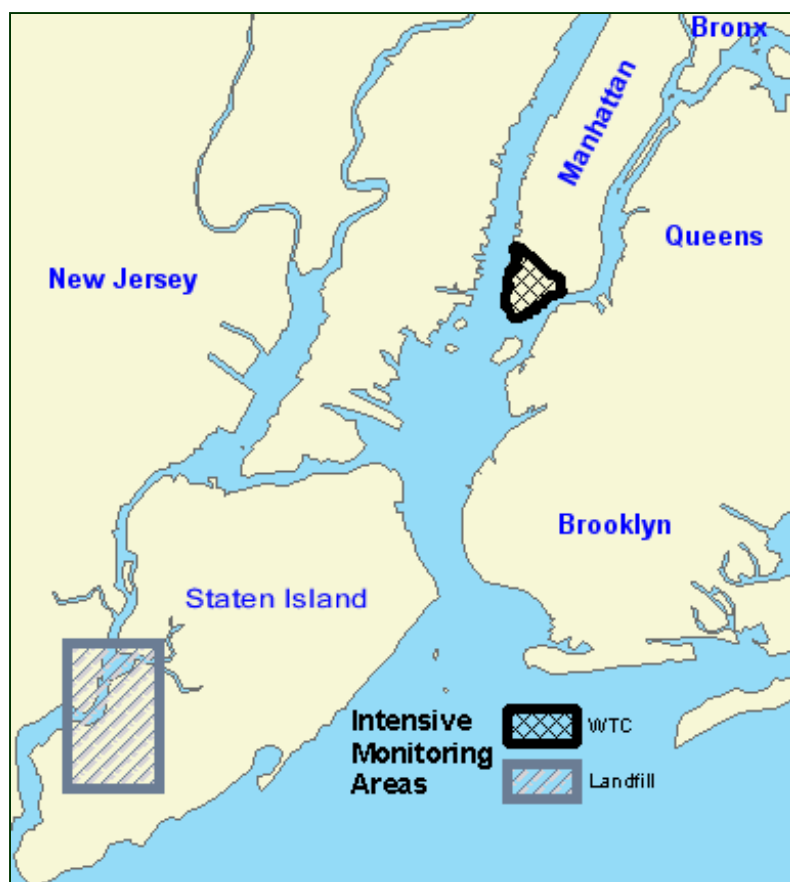
Minimum Value: 0.000018

Maximum Value: 0.180000

Average: 0.004220

■ Samples Below Screening Level

■ Samples Above Screening Level



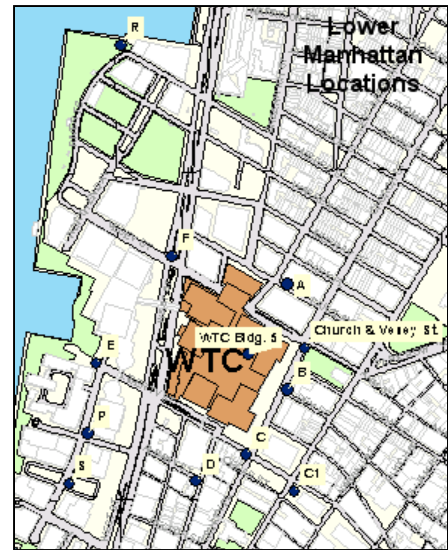
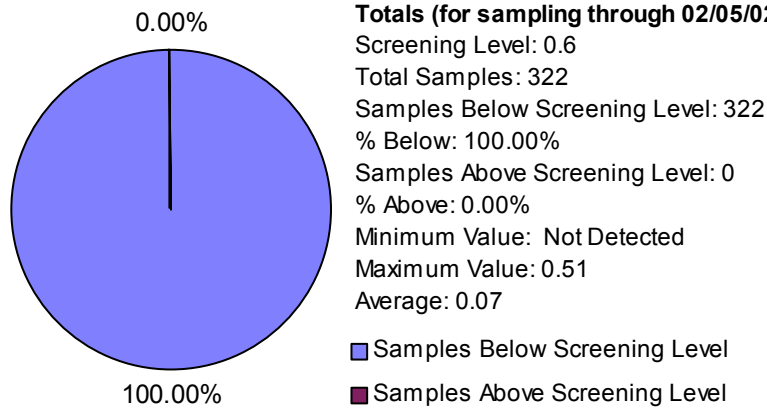
Dioxin refers to a group of chemicals created when many types of materials burn; it is also created during some types of manufacturing and incineration. Dioxin does not break down easily, remains in the environment and can be distributed by wind and water. It is found in a wide variety of places. People are exposed to dioxin primarily by eating meat, dairy and fish.

The burning of building and office debris at the World Trade Center is causing some emissions of dioxin. Most of the air samples taken in areas surrounding the work zone and analyzed for dioxin have been below EPA's screening level, which is set to protect against significantly increased risks of cancer and other adverse health effects. The screening level is based on an assumption of continuous exposure for a year to an average concentration of 0.16 nanograms per cubic meter (ng/m3). * Because the vast majority of individual as well as the average** measured dioxin levels have been lower than the screening level, EPA does not expect an increased risk of health problems as a result of dioxin being emitted from the World Trade Center site.

* The unit, ng/m³, is the mass of dioxin/furan compounds in nanograms (a billionth of a gram) per cubic meter of air. Measurements of the dioxin/furan compounds are grouped together into a single value termed "dioxin toxic equivalents" dioxin TEQs (see http://www.epa.gov/wtc/dioxin/dioxin_fact_sheet.html for more information on TEQs).

** For the purposes of evaluating exposure, an average concentration of many samples more closely represents exposure over a longer period. This longer term average is less than the maximum concentration that could be contacted at any one time, but because the screening level assumes continuous exposure for a year, the average of the measured concentrations is more appropriate for evaluating risk than an individual measurement.

Chromium Air Monitoring Data Summary for Lower Manhattan WTC Sampling



Chromium is a naturally occurring element commonly used in metal alloys and plumbing coatings in high rise buildings such as the World Trade Center (WTC). Hexavalent chromium, the most hazardous form, can cause cancer and other health problems at high levels. People can be exposed to chromium by eating food, drinking water, or breathing air

that is contaminated. In air, chromium compounds are present mostly as fine dust particles that eventually settle over land and water.

Levels of chromium measured at sites surrounding the WTC work zone have been below the screening level, which was set to protect against significantly increased risks of cancer and other health problems. The screening level is based on continuous exposure for a year to an average concentration of 0.6 micrograms of hexavalent chromium per cubic meter. *

EPA anticipates that the average chromium concentration will remain below the screening level and will continue to monitor levels of chromium in the air.

* The unit, ug/m³, is the mass of total chromium in micrograms (a millionth of a gram) in a cubic meter of air. Hexavalent chromium, the most hazardous form of chromium, is one part of measured total chromium.

Chromium Air Monitoring Data Summary for Staten Island Landfill WTC Sampling



Totals (for sampling through 04/12/02, in ug/m3)

Screening Level: 0.6
 Total Samples: 101
 Samples Below Screening Level: 100
 % Below: 99.01%
 Samples Above Screening Level: 1
 % Above: 0.99%
 Minimum Value: Not Detected
 Maximum Value: 1
 Average: 0.05

- Samples Below Screening Level
- Samples Above Screening Level



Chromium is a naturally occurring element commonly used in metal alloys and plumbing coatings in high rise buildings such as the World Trade Center (WTC). Hexavalent chromium, the most hazardous form, can cause cancer and other health problems at high levels. People can be exposed to chromium by eating food, drinking water, or breathing air that is

contaminated. In air, chromium compounds are present mostly as fine dust particles that eventually settle over land and water.

Levels of chromium measured at sites surrounding the WTC work zone have been below the screening level, which was set to protect against significantly increased risks of cancer and other health problems. The screening level is based on continuous exposure for a year to an average concentration of 0.6 micrograms of hexavalent chromium per cubic meter. *

EPA anticipates that the average chromium concentration will remain below the screening level and will continue to monitor levels of chromium in the air.

* The unit, $\mu\text{g}/\text{m}^3$, is the mass of total chromium in micrograms (a millionth of a gram) in a cubic meter of air. Hexavalent chromium, the most hazardous form of chromium, is one part of measured total chromium.