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Update on the Public Health Response To The Collapse Of The World Trade Center Towers

Public health professionals are evaluating ongoing recovery and response activities to ensure the health and safety of the people of Manhattan. Environmental sampling conducted to date has not indicated that the general population is being exposed to chemicals at levels of health concern. Environmental sampling is continuing to monitor the potential for contamination to leave the South Battery Park City (Chambers Street, north of West Thames Street and west of Broadway) area. The New York City Department of Health (NYCDOH) with the assistance of state and federal officials are beginning to look at residential areas to confirm that contamination does not exist.

What sampling has been done and what were the results of those samples?

- *Asbestos* has been detected in personal air samples of "hot-zone" workers (workers who are removing the debris) and low levels of asbestos have been detected in air samples collected on the "hot-zone" perimeter. Surface dust and debris containing less than <1-4% asbestos has been found in lower Manhattan.
- *Crystalline silica quartz* has been detected in some of the 30 settled dust samples collected by NIOSH. Although most samples contained less than 5%, some samples contained from 15-20% crystalline silica quartz. Non-detectable levels of crystalline silica have been found in the few personal air samples analyzed to date.
- Dust, bulk, and air samples ("hot-zone") as well as surface runoff water, river sediment, and river water have been analyzed for *other contaminants, including metals, polycyclic aromatic hydrocarbons (PAHs), dioxins and PCBs*. The low levels of these contaminants found do not indicate an immediate need to conduct widespread environmental testing for them. Additional environmental sampling is needed to ensure that ongoing WTC removal activities do not result in off-site migration of site-related material at levels of potential public health concern.

We are currently, focusing upon information on compounds known to be present which are expected to have *acute health effects* and are consistent with reports of health complaints from people in the area.

Current sampling efforts will focus on asbestos, respirable silica, cement and gypsum dusts, and particulates. *However, those exposures expected to have more chronic effects can be addressed after the acute public health needs have been met.*

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What health effects are expected?

Expected health effects depend partially on the amount of a substance to which one is exposed and the duration of that exposure. Areas with the highest amount of dust would be those considered to have the highest potential for causing health effects. With what we know about the dust so far, inhaling it will cause sore throats, and irritated eyes and nose. If you do not have respiratory or heart problems, this irritation will go away once the dust is correctly cleaned up. Until the health agencies can better determine the makeup of the dust, we cannot determine the other things that may be present that could affect you. The things we will be testing for in the dust and air are: asbestos, crystalline silica, pH, gypsum, mica, calcite and magnesium. We will also be testing to determine if these materials are present in the size ranges that can enter your lungs. As mentioned above, environmental testing around the WTC to date *does not* indicate that other materials such as dioxin, PCBs, metals, or volatile organic compounds would have gotten into homes or businesses from the building collapse and subsequent fire.

What are Acute Health Effects?

Acute effects usually occur rapidly as a result of short-term exposures, and are of short duration. Example: The health complaints in the area have been primarily irritant and respiratory in nature, such as eye, nose, and throat irritation which can cause exacerbation of pre-existing problems such as asthma, emphysema, and cardiopulmonary disease.

For people who have pre-existing respiratory or heart problems, some health effects (asthma attacks, tightness in chest) may occur up to two days after exposures occurred.

What are Chronic Health Effects?

Chronic effects generally occur as a result of long-term exposure, and are of long duration. Example: exposure to combustion products from the fuel, plane and building materials.

Exposures to asbestos and silica are known to cause asbestos-related lung disease. To date, asbestos and silica have not been found outside of the hot zone, at levels shown to cause these effects.

What should I do if I experience respiratory symptoms?

Dust and other particulate matter have the greatest impact on persons with underlying respiratory conditions. Such individuals may experience chest tightness, wheezing, and shortness of breath. Anyone who has difficulty breathing should consult their physicians, especially those with underlying respiratory conditions. People with asthma may need to increase their usual medical treatment with more frequent use of bronchodilators, and should consult their physicians if

necessary.

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In addition, individuals can follow the recommendations provided by the American Lung Association of New York to protect lungs against air pollution emanating from the World Trade Center area. Following these recommendations should reduce exposure and help people make more informed health decisions.

Please visit the American Lung Association of New York website at:
<http://www.lungusa.org/newyork/>

If I experience any eye irritation what should I do?

Ocular saline solutions or tap water may be used to rinse eyes irritated by dust. All persons should avoid wearing contact lenses while in the affected area.

*For additional information, please visit the New York City Department of Health (NYCDOH) web site at: **<http://www.nyc.gov/html/doh/home.html>***

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