



Testimony
Committee on Environment and
Public Works
Subcommittee on Superfund and
Environmental Health
United States Senate

ATSDR's World Trade Center
Environmental Monitoring Activities in the
Aftermath of 9/11

Statement of
Sven E. Rodenbeck, Sc.D., P.E., BCEE
Captain, U.S. Public Health Service
Deputy Branch Chief
Agency for Toxic Substances and Disease Registry
U.S. Department of Health and Human Services



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Good morning Madam Chairperson and Members of the Subcommittee. My name is Captain Sven Rodenbeck, Deputy Branch Chief within the Agency for Toxic Substances and Disease Registry (ATSDR). I have been a U.S. Public Health Service Commissioned Officer for over 28 years. Since September 1987, I have been stationed at ATSDR performing various technical and managerial assignments. These assignments have included evaluating the public health impacts of over 90 Superfund hazardous waste sites, co-authoring the 1990 ATSDR *The Public Health Implications of Medical Waste: A Report To Congress*, and leading various high profile agency responses to environmental health emergencies including the ATSDR World Trade Center (WTC) (September 2001 through April 2003) and the Hurricane Katrina/Rita (September 2005 through July 2006) environmental monitoring and public health assessment activities. In addition, from March 2004 through December 2005, I represented ATSDR on the U.S. Environmental Protection Agency's (EPA) WTC Expert Technical Review Panel. I received my Bachelor of Science degree in Environmental Engineering from the University of Central Florida (1978), Master of Science degree in Environmental Engineering from the University of Maryland (1983), and Doctor of Science degree in Environmental Health (with emphasis in epidemiology, toxicology, and risk assessment) from the Tulane University School of Public Health and Tropical Medicine (1997). I am a registered professional engineer in the states of Florida and Maryland and a Board Certified Environmental Engineering. I have authored or coauthored numerous peer-reviewed publications and a book chapter on solid and hazardous waste.

I am here today to provide you and the Subcommittee with a briefing of ATSDR's WTC environmental monitoring involvement. I will specifically discuss: 1) ATSDR's support provided to New York City Department of Health and Mental Hygiene (NYC DOHMH), 2) ATSDR's participation on multi-agency WTC Task Forces, and 3) ATSDR's efforts to strengthen environmental health sciences and responses to environmental disasters.

Almost immediately after the planes crashed into the World Trade Center Towers, ATSDR implemented its emergency response procedures. From September 16 - 26, 2001, an ATSDR technical staff person traveled to the EPA Region II Edison, New Jersey, Office to assure reliable communications between EPA Region II and ATSDR.

On September 26, 2001, NYC DOHMH requested that ATSDR provide on-site technical support to interpret the environmental monitoring data collected, assist with developing public health informational/educational material, and assist in providing technical information to the New York City public during public meetings. The on-site technical support to NYC DOHMH continued through June 28, 2002. In addition, ATSDR headquarters provided technical support which included the plotting and generation of geographic information system (GIS) maps and development of draft fact sheets that discussed asbestos, our pilot residential sampling investigation, and particulate matter (PM). NYC DOHMH

and the deployed ATSDR staff used these technical materials to prepare for the various community meetings.

NYC DOHMH/ATSDR Pilot Residential Area Investigation

ATSDR supported NYC DOHMH by implementing the *Ambient and Indoor Sampling for Public Health Evaluations of Residential Areas Near the World Trade Center*. Additional support was provided by the U.S. Federal Emergency Management Agency, EPA, the U.S. Public Health Service Commissioned Corps, and state and local environmental and health agencies. The objective was to conduct environmental sampling that characterized ambient and indoor airborne surface dust in a small number of residential areas of lower Manhattan. Sampling of residential units occurred from November 4 through December 11, 2001. NYC DOHMH and ATSDR released preliminary sampling results on February 8, 2002 and provided the final report for this investigation to the public on October 4, 2002. The primary finding of the pilot investigation was that the levels of materials detected in the air and dust did not pose potential health hazard provided that recommended cleaning measures were followed. Some of the other findings included:

- Low levels of asbestos were found in some settled surface dust, primarily below Chambers Street.
- The lower Manhattan residential areas had higher percentages of manmade vitreous fibers (MMVF), mineral components of concrete, and

mineral components of building wallboard in settled surface dust than the comparison area.

- Lower Manhattan airborne levels of total fibers were no different than the levels detected in the four buildings above 59th Street, which served as the comparison area.
- Mineral components of concrete and mineral components of building wall board were detected in air samples at higher levels in lower Manhattan residential areas than in the comparison area.

Based upon the findings, NYC DOHMH and ATSDR recommended:

- Additional monitoring of residential areas be conducted in lower Manhattan,
- Additional investigation be conducted to define background levels specific to the city of New York, and
- Lower Manhattan residents concerned about possible WTC-related dust in their residential areas participate in the 2002-3 EPA voluntary cleaning/sampling program.

ATSDR Support to Multi-Agency WTC Related Task Forces

ATSDR has participated on several WTC related task forces. ATSDR supported the EPA Task Force on Indoor Air in Lower Manhattan; which began in February 2002. This Task Force provided technical consultation to EPA Region II on how

best EPA Region II should respond to the indoor air issues related to the collapse of the WTC towers. In addition to the 2002-3 EPA voluntary cleaning/sampling of residential area, The Task Force on Indoor Air in Lower Manhattan provided technical advice for the:

- EPA sampling investigation to define better the typical New York City background levels of various WTC related materials (e.g., asbestos, MMVF, and crystalline silica);
- EPA demonstration project that evaluated the various cleaning techniques that could be used to remove WTC related materials from residential areas (e.g., HEPA vacuum); and
- EPA selection of chemicals of potential concern (COPC) to be addressed in indoor areas and development of air and surface screening values to employ as samples were collected.

The EPA Task Force on Indoor Air in Lower Manhattan completed its efforts in the summer of 2003.

ATSDR was also an active member of the New York City Lower Manhattan Air Task Force. The Mayor charged the task force to coordinate the response of the city agencies and to establish a complaint and information phone line to address WTC environmental issues. The City Task was active from March to June 2002.

ATSDR also participated on EPA's 2004-5 WTC Expert Technical Review Panel. The purpose of that panel was to help guide EPA on how to determine whether any remaining WTC-related dust could be in lower Manhattan or other areas at levels of public health concern. As a member of the panel, ATSDR provided various technical guidance some of which is documented in the March 2005 ATSDR Health Consultation, *Review of the Proposed Sampling Program to Determine Extent of World Trade Center Impacts to the Indoor Environment*.

Strengthening Environmental Health Sciences and Responses to Environmental Disasters

One science issue that ATSDR identified from its WTC experience was the need to further understand the health risks from exposure to MMVF, known also as synthetic vitreous fibers. To address this, ATSDR developed a "white paper" and the 2002 *Toxicological Profile for Synthetic Vitreous Fibers*. To obtain a better understanding of the health risks associated with asbestos and MMVF fibers less than 5 microns in length (sometimes called "short fibers"), ATSDR convened an expert panel. The panel met in New York City on October 29 and 30, 2002. The discussions, findings, and recommendations of the panelists are presented in the 2003 ATSDR *Report on the Expert Panel on Health Effects of Asbestos and Synthetic Vitreous Fibers: The Influence of Fiber Length*.

ATSDR's involvement on the various multi-agency WTC task forces has served as a template for our responses to other environmental disasters. The early establishment of multi-agency task forces can improve the development and

implementation of comprehensive solutions to the complex environmental problems that are associated with disasters. For example, the 2005 Centers for Disease Control and Prevention and EPA Environmental Health Needs and Habitability Assessment Joint Task Force provided the State of Louisiana and the City of New Orleans with a rapid scientific evaluation of the overarching environmental health issues that needed to be addressed before the city could be reinhabited. ATSDR also participated on the multi-agency task force that evaluated whether the storm surges from Hurricanes Katrina and Rita had caused wide-spread sediment or soil contamination of the New Orleans area.

In closing, I would like to take this opportunity to remember all of those lost as a result of the events of September 11, 2001, and their families and friends who will love them forever and keep their memories alive. And I would like to gratefully recognize the countless responders and volunteers, some of whom are still dealing with what happened on that fateful day and shortly thereafter. I know that I will always remember.

Madam Chairperson, this concludes my testimony. I would be happy to answer any questions.