Conclusions

This study though limited in nature, strongly suggest that:

1) Mercury is currently present in World Trade Center dust dispersed in lower Manhattan at levels that may exceed TCLP criteria. TCLP refers to Toxicity Characteristic Leaching Procedure, an EPA method used to identify hazardous wastes.

2) In addition, concentrations of mercury vapors and particulates released from World trade Center dust are greater than allowable limits of mercury in residential settings as established by the EPA.

3) Mercury vapors are released from the World Trade Center dust by a combination of factors such as heat and mechanical disturbance of dust.

4) When compared with mercury concentrations observed in non-industrial urban environments, mercury vapor concentrations in lower Manhattan are greater by a factor of 1,000 – 1,000,000.

5) Maintenance activities such as removal of window AC units have led to an increase in mercury vapor concentrations within residential units.

6) Mercury vapor concentrations in lower Manhattan (both inside and outside environments) are greater than:

a. United States Environmental Protection Agency's Inhalation Reference Concentration of .0003 mg/m^3,

b. United States Environmental Protection Agency's obtainable goal of 1 $\mu g/m^3$ (.001 mg/m^3) for residential environments,

c. Agency for Toxic Substances and Disease Registry's Minimal Risk Level of .0002 mg/m^3,

d. Agency for Toxic Substances and Disease Registry's recommended (to safeguard public health) indoor air mercury concentration of .0003 mg/m^3,

7) Workers and residents in lower Manhattan face a potential chronic exposure to mercury vapors and particulates. Likelihood of mercury exposure is greatest for construction, clean up, and demolition workers, as well as for children.

Recommendations

I. The findings of the pilot study suggest it is imperative that additional studies be undertaken prior to cleanup to determine the bioavailability and long-term health effects arising from occupational and residential exposure to mercury in lower Manhattan.

II. The findings of the pilot study further suggest that the failure to include mercury in the clean-up proposed by the EPA must be remedied. Indeed, the failure to do so would mean that in the course of the proposed clean-up, mercury would be more widely dispersed.

III. The studies and actions recommended above will have the following four benefits:

a. Safeguard public health in the aftermath of the worst environmental catastrophe in a non-industrial urban environment.

b. Minimize potential future litigation by workers and residents in lower Manhattan over health problems related to mercury exposure.

c. The use of appropriate technology to clean up mercury as well as other contaminants will insure a definitive decontamination of lower Manhattan.

d. A comprehensive clean-up program that includes mercury will reassure the public and provide an environmentally sound basis for the renewal of lower Manhattan.