ambient group inc.

Indoor environmental quality surveys
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November 1, 2001

Mr. Elliott Zuckerman
Director of Property Management
New York Mercantile Exchange
1 North End Avenue
New York, New York 10282

Re: Environmental Monitoring for Combustion Byproducts

Dear Mr. Zuckerman:

In order to address additional environmental concerns raised by the prolonged combustion processes that continues at the World Trade Center site, in early October your firm directed Ambient Group, Inc. to acquire specific sampling equipment and perform additional analysis of environmental compounds that might be generated by the combustion process. The equipment used and the analysis performed were chosen in accordance with *EPA Compendium of methods for the Determination of Toxic Organic Compounds in Ambient Air*. Samples were analyzed for chlorinated dioxins, PCBs, brominated dioxins and polycyclic hydrocarbons (PAHs). The four groups represent over 300 types and/or isomers of chemicals that are known to be hazardous substances associated with combustion.

Ambient air analysis, as opposed to occupational analysis, has many unique differences that make sampling, analysis and interpretation difficult. For instance, ambient sampling requires a very large sample volume for analysis, which in turn requires specialized equipment and a lengthy sampling period. In addition, each group of diverse compounds must be prepared separately and analyzed by distinct procedures. Finally, there are no reference standards with which to compare the results of airborne concentrations in order to determine the health risk to office workers.

One approach which is often used is to transform the air concentrations of all the different specific congeners of PCBs, dioxins and furans into Toxicity Equivalents (TEQs) of 2,3,7,8 tetrachloro-p-dioxins (2,3,7,8 TCDD). 2,3,7,8 TCDD is thought to be the most hazardous of this group of compounds and is given a weighting of 1, while other less toxic compounds are given a weighting of less than 1 relative to 2,3,7,8 TCDD.

With that said, our preliminary findings indicate that the levels found at 1 North End Avenue between October 16 and October 23, 2001 are as follows:

The total 2,3,7,8 TEQs of the	
PCBs	0.004 picograms/m^3
Chlorinated Dioxins	0.100 pg/m^3
Chlorinated Furans	0.097 pg/m^3
For a total TEQ of	0.201 pg/m^3 for all chlorinated congeners

1 pg = 0.000000000001 gram

These levels are very low and do not indicate that the combustion processes occurring at the World Trade Center site are causing hazardous concentrations of dioxins and PCBs in the outdoor the air at North End Avenue. The total TEQ is below the California chronic reference exposure level of 3.5 pg/m^3, which is the only standard that we have encountered to date and is based on long term exposure. Additionally, the EPA estimates that an average daily exposure to TEQ is 119 pg/day. The major source of dioxin exposure is diet, due to its tendency to bioaccumulate up the food chain. In other words, a TEQ of 2 pg/day is thought to be from inhalation exposure and the other 117 pg/day is thought to be from meat, dairy and fish intake.

The preliminary results of the Polyaromatic hydrocarbons indicate that the levels of these individual compounds are below their respective standards and guidelines.

Please know that we are processing the data as diligently as possible and will offer a full report in the near future.

Should you have any questions, please call me at the above number.

Sincerely,
Signed for Ambient Group, Inc. by:

William A. Esposito, CIH
President

WAEJ/sfm