Notes for testimony to NYC Council

I am John B. Glass, Jr. and am employed by The Hillmann Group, a national environmental and disaster management consulting firm. I am currently Board certified in the professional practice of Industrial Hygiene, professional safety, hazardous material management, professional environmental auditing, and environmental practice. I possess a Bachelors degree from Rutgers University, a Masters Degree from Temple University and am in the process of completing an MPH/DrPH Degree at the University of Medicine and Dentistry of New Jersey. I have over 20 years of experience in environmental health monitoring. I am a Past President of the New Jersey Local Section of the American Industrial Hygiene Association and the current Chair of their Environmental Issues, Special Interest Group.

I am here today to provide comments on the pending bill known as "Int. No. 650: A Local Law to amend the administrative code of the City of New York, in relation to permits for atmospheric biological, chemical, and radiological detectors." The AIHA, the premier association of environmental and occupational health and safety professionals, is opposed to enactment of this legislation. Furthermore, this testimony is on behalf of our New York membership and our national membership.

This code would require the issuance of permits to possess and deploy environmental monitoring equipment. It also requires that permit holders report exceedances to the NYPD. In Section 1, the bill states that the city of New York has an interest in insuring that any such instrument is reliable and effective so that it will not lead to excessive false alarms. In reading this section you might be lead to believe that the equipment in question are new and unique toxic monitors. Nevertheless, based upon the definitions provided later in the document they are the same tools that Industrial Hygienists have been using for decades. In fact, it would also include some common household items that no one would ever have considered. I am sure that was not he intent, but it is what is written.

I have several concerns regarding this bill including:

- ☐ How will five-year permits ensure daily and annual equipment calibration?
- ☐ How will it be determined in what configuration a unit will be used in during future events?
- ☐ How will the reporting of exceedances be accomplished when no such level exists at this time?
- ☐ How will the monitoring of all "toxic" materials be accounted for?
- ☐ How will emergency plans be reasonably created for situations that do not exist yet?
- ☐ Who will be evaluating the required exceedances reports?

I will address each of the above concerns more fully.

Air monitoring equipment can take on many forms. Direct reading equipment may be adjusted to highlight different characteristics or indicators, depending on the

circumstance. In order to use this equipment, it must be periodically calibrated. The annual calibration records of our firm alone entail multiple drawers of data each year. We possess hundreds of monitoring units and replace them periodically. Within a five-year period, perhaps 30% of our equipment may have been replaced. A five year review will not capture the turnover of equipment nor will it ensure that the equipment being used has been calibrated correctly for the intended use of this project. The data compilation reporting to convey this information is overwhelming and will require a significant cost to a firm like ours.

Exceedances of a given action level with a direct reading unit are commonplace. Activities such as movement of cabinets or furniture that has not been moved for a while is likely to cause a large dust release. The presence of an idling vehicle alongside an open window will cause many meters to instantly react. If we were to report every instance of a direct reading instrument identifying an anomalous reading, we would send tens of thousands of data points a year to the department. Since they will not have been at the site, they will not be able to justify the exceedances as a passing event. Consider monitoring dust levels at a construction site. On a clear day the levels will be magnitudes higher than normal exposures. On dry days or during aggressive groundbreaking, the levels will be even higher. Now consider that if an airborne toxin is released into the environment, the total dust levels do not need to be exceeded in order to have a toxic effect. Therefore, this reporting is not viable from the outset.

Many direct reading instruments have multiple purposes. For instance, dust monitors may be used to determine if construction activities are affecting neighboring properties. In this situation we would anticipate relatively high dust levels. The next project may require me to utilize the same instrument to determine filter efficiencies in and HVAC Room. During this project I would expect very low levels. If the "exceedance" criterion is set that only those concentrations that are considered high for construction activities are reported, then it will be useless in indoor activities. If it is set low enough to capture indoor anomalies, then virtually every exterior measurement will need to be reported, with the end effect of the Department becoming aware that there are trucks operating on our streets. If multiple exceedances levels are considered for each instrument, then the countless intermediate uses (not quite a demolition project, but not actually ambient monitoring either) would be unaccounted for.

Two definitions have the impact of making this an unusable standard. First the definition of biological agent includes all biological entities. There are not numbers that can be used to determine good or bad exposure. It depends on the specific conditions of the site, the types of organisms, the comparable concentration of the organisms, etc. If one were to assume that all bacillus bacteria were actually Bacillus Anthracic (Anthrax) then just about every environmental sample could be considered an exceedances until speciation is completed. It is reasonable to expect levels of none to 500 or even 5000 colony forming units of bacillus in a normal building. Even higher outside. A level of 1 or 2 colony forming units of B. Anthraces would be a significant concern.

In 1537, Paracelcus stated, "All things are poisons (and nothing is without poison). The dose alone keeps a thing from being a poison." This holds true today. Under the definition of chemical hazard, even water is determined to be a toxin. If specific lists are to be used, then the unique compounds will be missed. If specific criteria are used, it will be all encompassing. The problem stems from trying to take a scientific investigation and predetermine what its findings should be when it is done. The number of variables are far too great for a city agency to consider in drafting this type of bill.

The definition of detectors is also designed so liberally that each homeowner in the City will need to file for a permit for each of there smoke detectors. Under the rule, it determines a radioactive substance as any substance that "emits ionizing radiation including alpha, beta, gamma and/or neutron radiation." Nearly all detectors on the market today are sourced with a small radioisotope. They work by utilizing a small radiological detector that determines if more of the radioactive energy is dispersed than normal, thereby indicating a smoke event. These units are radiological substances, radiological detectors, and by their very design, direct reading toxic contaminant detectors i.e. *smoke* detectors. Wouldn't this also ban the possession of a carbon monoxide detector? I would say this is probably not their intent, but it is what they have written.

The permit application requires emergency response plans for use with the detectors. This has been in place long before this administration. If an emergency arises, you call for emergency services, that is, dial 911. To provide any greater information than that would merely be superfluous and intended only to satisfy the permit requirement, and provide no greater safety. There is no way to determine what emergency plan could possibly be needed for situations that have not yet arisen.

If enacted, this bill would require all exceedances to be reported to the NYPD. I would like to know how this data will be evaluated, responded to and recorded. And, perhaps more importantly, what will occur when the reviewer comes to a different conclusion than the site professional? Will the judgment of a seasoned exposure assessment scientist be disregarded in deference to the judgment of some administrator? And, if this is the case, what liability will their be if the site professional identified a potential hazard that is dismissed by the department and subsequently found to be valid? Will there be repercussions to the site investigator that acts upon information they feel to be valid, and in keeping with the Code of Ethics they are bound to through their certifications, informs the public of a potential hazard? This bill is in direct conflict to these ethical obligations Industrial hygienists and environmental professionals hold as binding.

When responding to ground zero, our firm collected hundred of thousands of air samples. Our reaction to each of the results was unique and based upon the situation that was in front of us. If you had asked us to predetermine what our responses would be, it would not have been possible. Just as it is not possible now to say what the appropriate response will be to an unknown elevation of an unknown contaminant at an unknown location with no known circumstances.

I understand that the desire of this legislation is to reduce the number of premature reactions to direct reading instruments by untrained individuals. Wouldn't that same logic apply to an individual untrained in medicine calling in a potential heart attack when it is found only to be angina? Eliminating that call would endanger only one life, yet eliminating the call about potential chemical exposures would be endangering countless lives. Along the same thought, it would be equally prudent to eliminate all fire alarms so that the fire department would not have to respond to so many false alarms, this would only affect a single building or a block. A potential dirty bomb or biological contaminant could jeopardize the entire city. The thought line does not hold up to scrutiny and must be reexamined.

For your consideration, I would like to suggest a more general approach to this rule. It may be advisable to require all entities offering professional consulting in this arena to have properly credentialed consultants overseeing the evaluations. Designations such as a Certified Industrial Hygienist, Qualified Environmental Professional or Certified Hazardous Material Manager are a few examples. This will insure that the individuals responsible for the final interpretation of data are qualified to make those decisions, and reduce the occurrences of untrained individuals creating unnecessary hysteria.

Not withstanding any of the above. Please remember that you may have hundreds or thousands of false alarms over the years. However, to be responsible for missing the one time it was important to know early will have implications that could last for generations. This is a risk that should not be taken lightly.

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