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December 30, 2002

Ms. Lindsey Kayman, CIH
Chair
AIHA Laboratory Health and Safety Committee
2700 Prosperity Avenue
Suite 250
Fairfax, VA 22031

RE: Section 510.4 of the 2000 International Mechanical Code

Dear Ms. Kayman:

This is in response to your letter of December 2, 2002 in which you have asked the following question with regard to Section 510.4 of the 2000 International Mechanical Code.

"When small amounts of incompatible materials are used in different laboratory hoods, is manifolding prohibited even though chemical concentrations in the ductwork will be infinitesimally small?"

Section 510.4 allows multiple laboratory hoods to be served by a common exhaust duct system (manifold) and a common exhaust fan provided that the effluent from such hoods does not create a hazard when mixed in the common duct and fan system. The IFC definition states that the hood effluents would be incompatible if, when mixed, they could potentially react creating byproducts that are hazardous to life or property. To determine if hazardous byproducts are a possible outcome of mixing hood effluents, one would have to evaluate the chemicals used and the quantities of such and predict the potential reactions. Of the possible chemical reactions, one must determine which yield byproducts that are hazardous. Lastly, one must determine if the quantity of any such hazardous byproduct is sufficient to cause harm to life or property.

Since there is no absolute answer to your question, a judgment will have to be made on a case-by-case basis. It is logical to assume that there are some "infinitesimally" small quantities of incompatible chemicals that would not yield enough hazardous byproducts to cause harm. Only a qualified chemist can make such determinations.

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December 30, 2002

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This opinion is based on the information which you have provided. We have made no independent effort to verify the accuracy of your information nor have we conducted a review beyond the scope of your question. As this interpretation is only advisory, please consult with the authority having jurisdiction, the code official.

Sincerely,

A handwritten signature in cursive script that reads "Gregg Gross".

Gregg Gross

Codes and Standards Staff

GG/rt

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