DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control
National Institute for Occupational
Safety and Health – ALOSH
944 Chestnut Ridge Road
Morgantown, WV 26505

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To All Respirator Manufacturers

During the past several years NIOSH has had inquiries from both respirator manufacturer's and general industry on the Institute's ability to certify air purifying respirators for compounds not listed in the regulations. The first basic step in determining whether NIOSH will certify is to refer to the Respirator Decision logic and use the substance's chemical and physical properties to determine whether an air purifying respirator can be worn for protection against this substance.

30 CFR 11:11.90(1)(c) and 11.150 states that NIOSH can accept applications for approvals of gas masks and chemical cartridge respirators for protection against gases and vapors not specifically listed. Acceptance or rejection of these applications are made on the basis of the effects on the wearer's health and safety. In accordance with this requirement and the general construction (11.61(a)) and general test requirements (11.63(c)) the Institute has compiled a list of requirements that they feel are essential in determining potential wearer effects.

All applications for approval of respirators designed as respiratory protection against gases or vapors not specifically set forth in Part 11 should contain the following information:

1. Data on desorption of gases and vapors from the sorbent including a flow-temperature study at low and high temperatures and humidities: Data should be sufficient to demonstrate that the desorbed level of gases and vapors will not be harmful to the wearer.

2. Data on desorption of impregnating agents used in the cartridge/canister including a flow-temperature study at low and high temperatures and humidities: Data should be sufficient to demonstrate safe levels of desorbed agents.

3. A list of catalytic products produced in the reaction of the sorbent with the contaminant gases and vapors, their concentrations and their toxicities.

4. Data on the toxicity of the impregnating agent(s) sufficient to insure that there is no creation of hazard to the wearer.

5. Family of breakthrough time curves at low & high temperatures, humidities & concentrations.

6. Data on the effects of the commonly found industrial interferences which could impair the ability of the respirator to protect the wearer (i.e., decreased service life).

We recognize the above list is by no means all inclusive. This is our attempt to itemize the types of information needed in order to determine the intrinsic safety of the respirator. All other information regarding wearer safety would aid NIOSH in their evaluation and would be welcomed in the application.

For further technical information regarding these requirements, please contact the Testing and Certification Branch.

Sincerely yours,

Nancy Bollinger
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