

Current Intelligence Bulletin 14

September 27, 1976

INORGANIC ARSENIC
RESPIRATORY PROTECTION

September 27, 1976

Dear Colleague:

Because some inorganic arsenic compounds have a significant vapor pressure, the National Institute for Occupational Safety and Health (NIOSH) has recently eliminated certain types of respirators from its list of recommended protective equipment for workers exposed to inorganic arsenic.

The NIOSH recommendations for an inorganic arsenic standard suggest particular types of personal respiratory protective devices as suitable for employee protection under defined conditions. The current NIOSH recommendations are:

Full face coverage---necessary to prevent eye and facial irritation. Half-mask respirators are eliminated from the list of approved devices.

High efficiency particulate filters for inorganic arsenic compounds that have no significant vapor pressure---to enable meeting the recommended standard of 2.0 μg arsenic per cubic meter of air as specified in the criteria document transmitted to the Occupational Safety and Health Administration on June 23, 1975.

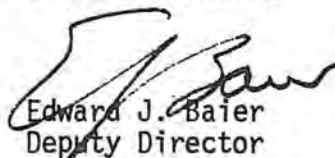
Air-purifying respiratory protection with an acid gas canister, as a minimum, for inorganic arsenic compounds with significant vapor pressure (such as arsenic trichloride)---to prevent exposure to greater than the recommended maximum concentration of arsenic due to the passage of volatile arsenicals through a high efficiency filter.

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Engineering controls are recommended to maintain arsenic concentrations below the occupational environment limit. Compliance should not be achieved by the use of respirators except during the time period necessary to install or test the required engineering controls, for nonroutine operations (such as a brief exposure to concentrations in excess of the limit as a result of maintenance or repair activities), or during emergencies when air concentrations of arsenic exceed the limit.

We hope you find this information helpful.

Sincerely yours,



Edward J. Baier
Deputy Director

NIOSH

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