



Gases, Vapors, Fumes, Dusts, and Mists Compliance Program for Construction

The purpose of this program is to inform interested persons, including employees, that EMA is complying with OSHA's Gases, Vapors, Fumes, Dusts, and Mists standard, Title 29 Code of Federal Regulations 1926.55 and other OSHA rules as needed to ensure that no employee is exposed to inhalation, ingestion, skin absorption, or contact with any material or substance at a concentration above those specified in the "Threshold Limit Values of Airborne Contaminants for 1970" of the American Conference of Governmental Industrial Hygienists found in Appendix A of 29 CFR 1926.55.

To achieve compliance we must first implement all feasible administrative and engineering controls. However, when such controls are not feasible, we will use protective equipment or other protective measures to keep the exposure of employees to air contaminants within the limits prescribed in Appendix A of 29 CFR 1926.55. All equipment and technical measures used to achieve compliance will first be approved for each particular use by a competent industrial hygienist or other technically qualified person.

This program applies to all construction work (including alteration, repair, painting, and decorating) where one of our employees may be occupationally exposed to gases, vapors, fumes, dusts, and mists at concentrations above those specified in Appendix A of 29 CFR 1926.55

Administrative Duties

This written safety program is for the EMA construction work sites. The Project Manager is the program coordinator/manager and is responsible for its implementation. Copies of the written program may be obtained at our corporate offices.

Exposure assessment and monitoring

We conduct personal or area sampling for gases, vapors, fumes, dusts, and mists to measure worker exposures. Air sampling is needed to measure worker exposures and select appropriate engineering controls and respiratory protection. Where data is collected it must be retained to support negative exposure assessments.

We will perform air monitoring as needed to measure the effectiveness of controls.

Our Exposure Assessment and Monitoring Program is attached to this written program.

The current OSHA permissible exposure limit (PEL) for respirable dust containing crystalline silica (quartz) is measured by millions of particles per cubic foot (mppcf) and is calculated as:

$$\text{PEL} = (250 \text{ mppcf}) / (\% \text{ silica} + 5)$$

Note: PEL is an 8 hour time-weighted average (TWA).

Medical surveillance

Although we understand that medical examinations should always supplement effective gas, vapor, fume, dust, and mist monitoring and controls, and never substitute for them, we provide medical examinations for all workers who may be exposed to the following gases, vapors, fumes, dusts, or mists at or above their respective PEL found in 29 CFR 1926.55.

These medical examinations are provided by professional healthcare organizations and shall include all components as required under particular substance standards:

The following medical surveillance material is a list of medical monitoring recommendations from the National Institute for Occupational Safety and Health (NIOSH): The examinations must occur before job placement or upon entering a trade, and at least every three years thereafter (NIOSH recommendation). Examinations will include at least the following: * A medical and occupational history to collect data on exposure and signs and symptoms of respiratory disease. * A chest X-ray classified according to the 1980 International Labour Office (ILO) International Classification of Radiographs of Pneumoconiosis. * Pulmonary function testing (spirometry). * An annual evaluation for tuberculosis. * Availability of air and medical surveillance data to workers is an OSHA requirement (29 CFR 1926.33).

Record keeping

We know record keeping is critical for our gases, vapors, fumes, dusts, and mists operations. Our record keeping tasks, at a minimum, include:

- Exposure monitoring data – 30 Years
- Medical surveillance data – Duration of employment plus 30 years

Training and information

We will provide our workers with regulatory training that includes requirements of the substance specific requirements. This will include health effects, background information, engineering controls, ppe, medical surveillance, communication of hazards, hygiene, and methods of compliance at a minimum.

Methods of compliance

This section contains our description of the specific means that we will employ to achieve compliance with the requirements of 29 CFR 1926.27, .51, .55, .95, .100 - .105, and .200.

Administrative procedures, engineering controls, and good work practices

Exposures to gases, vapors, fumes, dusts, and mists can be controlled through the use of engineering controls and work practices. Engineering controls are hazard controls designed into equipment and workplaces. Work practices are procedures followed by employers and workers to control hazards. Some of the engineering controls and work practices we may use during work that generate gases, vapors, fumes, dusts, and mists are:

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equipment and workplaces. Work practices are procedures followed by employers and workers to control hazards. Some of the engineering controls and work practices you may use during work that could generate silica dust are: * Recognize when silica dust may be generated and plan ahead to eliminate or control the dust at the source. Awareness and planning are keys to prevention of silicosis. * Use dust collection systems available for many types of dust-generating equipment. When purchasing equipment, our priority will be equipment that contains dust control methods. * During rock drilling, use water through the drill stem to reduce the amount of dust in the air, or use a drill with a dust collection system. * When sawing concrete or masonry, use saws that provide water to the blade. * When available, use local exhaust ventilation systems to prevent dust from being released into the air. * When doing abrasive blasting, substitute less hazardous materials than silica sand or other substances containing more than 1% crystalline silica. * Use engineering controls and containment methods, such as blast-cleaning machines and cabinets, wet drilling, or wet sawing of silica-containing materials to control the hazard and protect adjacent workers from exposures.

Hygiene facilities and practices

The following personal hygiene practices are essential for protecting our workers from gases, vapors, fumes, dusts, and mists:

Personal hygiene practices are essential for protecting workers from gases, vapors, fumes, dusts, and mists. The same is true for respirable crystalline silica and other contaminants during abrasive-blasting operations. Here are some suggested practices for protecting workers from crystalline silica during these operations: * Do not eat, drink, or use tobacco products in dusty areas. * Wash your hands and faces before eating, drinking, or smoking outside dusty areas. * Park cars where you will not be contaminated with silica and other substances such as lead. * Practice good personal hygiene to avoid unnecessary exposure to other work site contaminants such as lead. * Shower (if possible) and change into clean clothes before leaving the work site to prevent contamination of cars, homes, and other work areas.

Housekeeping

Our housekeeping practices include:

Housekeeping must be done often and it must be done properly. For example, you don't want to dry sweep dust into a dust pan; this puts some of the dust back into the air. You may choose to use vacuums with high-efficiency particulate air (HEPA) filters, or use wet sweeping instead of dry sweeping. When removing dust from equipment, use a water hose rather than compressed air. Again, check the chemical-specific regulation, if existent, for housekeeping specifics.

Protective clothing

We will take the following steps to assure that gas, vapor, fume, dust, and mist work clothing do not contaminate cars, homes, or work sites outside the dusty area:

For example, to assure that dusty clothes do not contaminate cars, homes, or work sites outside a dusty area, you might have employees: * Change into disposable or washable work clothes at the work site. * Shower and change into clean clothes before leaving the work site.

Respirators and the respiratory protection program

We know the OSHA regulation requires us to implement a respirator program when engineering,

administrative, and good work practices are not enough to keep gases, vapors, fumes, dusts, and mists below their permissible exposure limit (PEL) as found in 29 CFR 1926.55. We will not use respirators as the primary means of preventing or minimizing exposures to airborne contaminants. Instead, we will use effective source controls such as:

- Substitution,
- Automation,
- Enclosed systems,
- Local exhaust ventilation,
- Wet methods, and
- Good work practices.

Such measures will be the primary means of protecting our workers. However, when source controls cannot keep exposures below the PEL, controls will be supplemented with the use of respirators.

Our Respirator Program is attached to this written program and follows the requirements of 29 CFR 1926.103.

Communication of Hazards

We will post warning signs to mark the boundaries of work areas contaminated with gases, vapors, fumes, dusts, and/or mists at or above their PELs.

Our Communication of Hazards program is supplemented by the requirements of 29 CFR 1926.59-Hazard Communication and is attached to this written program.