



RESPIRATORY PROTECTION

Innovations Manufacturing, Inc. (the Company)

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Purpose

It is the intention of the Company to provide and maintain a respiratory protection program that meets or exceeds all federal standards. The Company will first seek to engineer potential harmful vapors and oxygen deficient atmosphere exposure hazards out of any Company owned or operated work environment. If engineering control measures are not feasible, or during emergency situations with high exposure, respirators shall be provided to employees which are applicable and suitable for the purpose intended.

Scope

This program applies to all employees.

Respiratory Program Administrator

The Safety Director is the Respiratory Protection program designated administrator in order to ensure that the requirements of the same are complied with by all employees.

The Administrator is knowledgeable of the complexity of the program, able to conduct evaluations, and has been adequately trained.

The responsibilities of the Program Administrator will include, but are not limited to:

- Conducting an annual written evaluation of the program. The program evaluation should be completed no later than December 31, of each year.
- Ensuring an adequate supply of respirators, cartridges, and repair/replacement parts are available to employees. The Program Administrator may delegate this duty but will retain overall responsibility.
- Respiratory protective equipment must be selected based on respiratory hazards. Hazards must be identified, and NIOSH certified respirators must be selected and provided based on those hazards and factors affecting performance.
- Ensuring that all respirator users have been trained in the use, selection and limitations of the type of respirators they will be using prior to the first time the respirator must be used. While the duty of conducting the training may be delegated, the Program Administrator retains final responsibility for seeing that all employees are appropriately trained.
- Ensuring that all respirator users have been medically evaluated and found fit to use the type of respirators that will be required in their job. The medical evaluation must be completed before an employee can use a respirator.
- Ensuring that all respirator users are fit-tested at least annually and more often if other federal requirements apply.
- Ensuring that respirators are individually issued, are cleaned and sanitized on a regular basis, and respirators are stored in a clean and accessible location. This duty may also be delegated but the program Administrator retains final responsibility for seeing it through.
- Ensuring that respirators are selected based on the hazard that will be encountered.
- Ensuring that employee exposure is monitored to assure correct respirator type is used. Exposure monitoring may be delegated to others, however, the Program Administrator has final responsibility of monitoring completion and to request assistance when necessary.
- Ensuring an employee must leave the area if a vapor/gas breakthrough, changes in breathing resistance, and/or leakage of the facepiece occur. Employees must leave the respirator use area if they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece.

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- Ensuring that the elements of the Respiratory Protection Program for the selection, use, cleaning/main-tenance, storage and fit-testing of respirators are followed.
- Ensuring that respirator parts are not exchanged between brands of respirators.
- Ensuring medical evaluations, respirators, and required training are provided at no cost to the employee.

Medical Evaluation Requirements

General

General requirement responsibilities apply to Company employees and contractor/consultant employees separately. Because Contractors are not employees of the Company, they are responsible for and must manage their own respiratory protection program.

A medical evaluation must be completed before a worker can use a respirator. The medical evaluation must be confidential, during normal working hours, convenient, understandable and the employee should be allowed to discuss the results with the PLHCP.

The Company may discontinue an employee's medical evaluations when the employee is no longer required to use a respirator.

Medical Evaluation Procedures

Under guideline parameters required by federal regulation, the Company shall identify a physician or other licensed health care professional (PLHCP) to perform medical evaluations using a medical questionnaire or an initial medical examination that obtains the same information as the medical questionnaire. The medical evaluation shall obtain the information requested by the Medical Questionnaire (or equivalent).

The medical evaluation prior to fit-testing will be confidential, conducted during normal working hours, be at a convenient time and location, be understandable and the employee will be given a chance to discuss the results with the PLHCP.

Supplemental Information for the PLHCP

The following information must be provided to the PLHCP before the PLHCP makes a recommendation concerning an employee's ability to use a respirator:

- The type and weight of the respirator to be used by the employee
- The duration and frequency of respirator use (including use for rescue and escape)
- The expected physical work effort
- Additional protective clothing and equipment to be worn
- Temperature and humidity extremes that may be encountered

The Company shall provide the PLHCP with a copy of the Company's Respiratory Protection Program.

Note: When the Company replaces a PLHCP, the Company must ensure that the new PLHCP obtains this information either by providing the documents directly to the PLHCP or having the documents transferred from the former PLHCP to the new PLHCP. However, OSHA does not expect Companies to have employees medically re-evaluated solely because a new PLHCP has been selected.

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Medical Determination

In determining the employee's ability to use a respirator, the Company shall obtain a written recommendation regarding the employee's ability to use the respirator from the PLHCP. The recommendation shall provide only the following information:

- Any limitations on respirator use related to the medical condition of the employee or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator.
- The need, if any, for follow-up medical evaluations, and
- A statement that the PLHCP has provided the employee with a copy of the PLHCP's written recommendation.

All recommendations are to be sent to the Company's Safety Director.

Additional Medical Evaluations

At a minimum, the Company shall provide additional medical evaluations that comply with the requirements of this program if:

- An employee reports medical signs or symptoms that are related to ability to use a respirator.
- A PLHCP supervisor or the respirator Program Administrator informs the Company that an employee needs to be re-evaluated.
- Information from the respiratory protection program, including observations made during fit testing and program evaluation indicates a need for employee re-evaluation, or
- A change occurs in workplace conditions (e.g., physical work effort, protective clothing, and temperature) that may result in a substantial increase in the physiological burden placed on an employee.

Work Site Procedures

The Company has created engineered protections against all identified potential respiratory exposures.

The Company does not provide respiratory protection to employees unless a contaminant that exceeds the OSHA PEL is introduced to the workplace. Employees are allowed to use dust filtering face masks on a voluntary basis, in such case the employee is provided with the Volunteer Use information in the later section of this procedure.

In the event a contaminant above the OSHA PEL is introduced to the workplace and engineered protections are not possible, each work site where respirators are required to protect the health of the worker shall have work site procedures that follow the guidelines of this program. The following areas shall be included:

- Identification of specific hazard requiring respiratory protection.
- The selection of the appropriate respiratory protection equipment based on the specific hazard and concentration levels, characteristics, etc.
- Specific brand and models of respiratory equipment to be used shall be identified in the procedures.
- Verification that each user of respiratory protection is qualified (medical approval, current fit test, annual training, and demonstrates competency).

Respirator Selection Criteria

The Company has created engineered protections against all identified potential respiratory exposures.

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In the event a contaminant above the OSHA PEL is introduced to the workplace and engineered protections are not possible, the Company will provide respiratory equipment to employees at no cost to the employee.

The selection of the respiratory equipment is based on the hazards the employee is exposed to. The Company shall:

- Perform hazard identification
- Select and provide respirators based on the hazards and factors affecting performance
- Establish brands and models to be used, and
- Estimate exposures and contaminant information

Hazard Identification

The Company's identification of respiratory hazards will be contained in the site-specific respiratory protection plan. However, common respiratory hazards that may be encountered include:

- Dust
- Chips
- Welding Fumes

Characteristics of Hazardous Operation or Process

- Hot work operations: welding, chemical reactions, soldering, melting, melding, and burning
- Shaping operations: cutting, grinding, filing, milling, melding, sawing, and drilling

Particulate contaminants

- Dusts are mechanically generated solid particulates (0.5 to 10µm)
- Fumes are solid condensation particles of small diameter (0.1 to 1.0 µm)

Selection of Respirator

The following factors shall be considered when selecting the proper respirator

Concentration and Type of Contaminant

The concentration and type of contaminant will determine the model and type of respirator and cartridges/filters or filters to be used. The concentration is based on a sampling of the atmosphere.

Location of Hazardous Area (nearby contaminants, etc.)

Worker Activity

(Cutting, drilling, grinding, welding & hood requirement, etc.)

Types of Respirators

Air-purifying respirators can be either full-face or half masks with mechanical or chemical cartridges to filter dusts, mists, fumes, vapors or gases.

Powered air-purifying respirators use a blower to pass the contaminated air through a filter. The purified air is then delivered into a mask or hood. They filter dusts, mists, fumes, vapors and gases, just like ordinary air-purifying respirators.

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Air-purifying respirators cannot be used in oxygen-deficient atmospheres, which can result when another gas displaces the oxygen or consumption of oxygen by a chemical reaction occurs. Oxygen levels below 19.5% require either a source of supplied air or supplied-air respirator protection. Levels below 16% are considered to be unsafe and could cause death. To determine the proper cartridge for air-purifying respirators contact the Company's Safety Manager or a qualified on-site safety representative of the client. You should also consult the Safety Data Sheet of the substance that needs to be filtered.

All cartridges are assigned a color designating the type of contaminant they will filter:

White:	Acid gas
Black:	Organic vapors
Green:	Ammonia gas
Yellow:	Acid gas and organic vapors
Purple:	Radioactive materials
Orange:	Dust, fumes and mists
Olive:	Other gases and vapors

Once the wearer of the respirator can detect an odor, irritation, or taste of the contaminant, the cartridge should be replaced. All cartridges and/or filters shall be changed at the beginning of each shift.

Supplied-air respirators provide the highest level of protection against highly toxic and unknown materials. Supplied air refers to self-contained breathing apparatuses (SCBAs) and air-line respirators. SCBAs have a limited air supply that is carried by the user, allowing for good mobility and fewer restrictions than air-line respirators.

Air-line respirators have an air hose that is connected to a fresh air supply from a central source. The source can be from a compressed air cylinder or air compressor that provides at least Grade D breathing air. The Company does not allow employees to perform any work that requires Air-line respirators.

Emergency Escape Breathing Apparatuses (EEBAs) provide oxygen for 5, 10 or 15 minutes depending on the unit. These are for emergency situations in which an employee must escape from environments immediately dangerous to life or health (IDLH). There is no scenario where atmospheric conditions in Company facilities would require employees to wear emergency escape breathing apparatus.

SCBA (Self Contained Breathing Apparatus)

The Company does NOT allow employees to work in an Immediately Dangerous to Life and Health (IDLH) environment.

In order to maintain the NIOSH/MSHA approval of any respirator, mixing parts from other respirator manufacturers is prohibited. This includes airline hoses, valves, gaskets, cartridges, etc. For example, do not use North cartridges or valve gaskets with an MSA or Scott product.

Brand and Models

Due to mechanical engineering, the Company operations do not introduce air contaminants that requires the use of respiratory protection. For welding fumes, air replacement engineering has been introduced to ensure clean air is available for welders. Cutting operations vacuums gathers dust and chips of non-hazardous dust and chips. If an employee wants to wear a face mask for the purpose of Covid protection, the use is personal and of a voluntary nature.

Use, Maintenance and Care of Respirators

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Voluntary Use

If an employee chooses to voluntarily wear a respirator when not required by this Program (contaminants do not meet protection standards, odors, etc.) they will be advised of the following in their training:

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for employees.

However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the employee. Sometimes, employees may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your Company provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

- Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator's limitations.
- Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
- Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
 - If you are aware of an atmospheric hazard that exceeds the OSHA PEL, the Company will provide the required respiratory protection program for your use.
- Keep track of your respirator so that you do not mistakenly use someone else's respirator.

Training

Employees are provided training on Respiratory Protection. Training shall address employee knowledge of respirators, fit, use, limitations, emergency situations, wearing, fit checks, maintenance and storage, medical signs and symptoms of effective use and general requirements of the OSHA standard. The training must be provided before requiring the employee to use a respirator or when a contaminant that exceeds the OSHA PEL is introduced.

Retraining

Retraining shall be administered annually, and when the following situations occur:

- Changes in the workplace or the type of respirator render previous training obsolete.
- Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill, or
- Any other situation arises in which retraining appears necessary to ensure safe respirator use.

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