



City of Barre
Safety and Health Program
Respiratory Protection Program
11/26/2018

PURPOSE

The City of Barre is committed to providing a safe and healthy work environment for its employees. On occasion, employees may be exposed to airborne contaminants. In an effort to limit their exposure, the City of Barre will do the following:

1. Evaluate respiratory hazards in order to select appropriate respiratory protection.
2. Ensure employees are medically able to wear respirators.
3. Fit test employees with appropriate respirators.
4. Establish procedures to ensure employees properly care for and maintain their respirators.
5. Ensure high-quality breathing air is supplied for the air-supplying respirators.
6. Conduct continuing respirator training.
7. Evaluate the program periodically to ensure its effectiveness.

Engineering controls, such as ventilation and substitution of less toxic materials, are the first line of defense at the City of Barre; however, engineering controls have not always been feasible for some of our operations, or have not always completely controlled the identified hazards. In these situations, respirators and other protective equipment must be used. The work processes requiring respirator use at City of Barre are outlined in Table 1 in the Scope and Application section of this document.

In addition, some employees have expressed a desire to wear respirators during certain operations that do not require respiratory protection. As a general policy, the City of Barre will review each of these requests on a case-by-case basis. In order for the City to properly evaluate the job and the potential for use of a respiratory the employee will submit a “Request for Respirator Consideration” (Appendix A). The City of Barre will respond in writing to any request to wear a respirator where the job has not been defined as requiring one.

If the use of respiratory protection in a specific case will not jeopardize the health or safety of the worker(s), The City of Barre will provide single use filtering facepiece respirators for voluntary use. As outlined in the Scope and Application section below, voluntary respirator use is subject to certain requirements of this program.



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SCOPE AND APPLICATION

This program applies to all employees who are required to wear respirators during normal work operations. There are no emergency uses of respirators for employees covered under this program.

In addition, any employee who voluntarily wears a respirator when a respirator is not required (e.g. in certain maintenance and coating operations) is subject to the medical evaluation, cleaning, maintenance, and storage elements of this program, and must be provided with certain information specified in this section of the program. Employees participating in the respiratory protection program do so at no cost to them. The expense associated with training, medical evaluations, and respiratory protection equipment will be borne by the municipality.

Table 1: Respirator Use at the City of Barre

Respirator Type	Department/Process
Filtering facepiece (dust mask)	Voluntary use for employees with nuisance-level dust exposure
Half-facepiece air purifying respirator (half-mask)	Highway: Use for protection against low levels of paint spray solvents during spray finishing
	Water Treatment – Transfer of potassium Promaganate from 5 gallon pails to chamber
Supplied Air Abrasive Blasting helmet, with breathing air compressor	Highway: For abrasive blasting of plowing equipment and vehicles
	Highway: Welding processes
Supplied Air – SCBA	Fire – IDLH (immediately dangerous to life and health) atmosphere. For fire fighting duties as required. O2 levels below 19.5%,



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*Employees who voluntarily wear NIOSH approved filtering facepieces (dust masks) for “nuisance-level” exposures are **not** subject to the medical evaluation, cleaning, storage, and maintenance provisions of this program.*

RESPONSIBILITIES

Program Administrator

The Program Administrator is responsible for administering the respiratory protection program. Duties of the program administrator include:

- Identifying work areas, processes, or tasks that require workers to wear respirators, and evaluating hazards.
- Selection of respiratory protection options.
- Monitoring respirator use to ensure that respirators are used in accordance with their certifications.
- Arranging for and/or conducting training.
- Ensuring proper storage and maintenance of respiratory protection equipment.
- Conducting qualitative fit testing with **Bitrex**.
- Administering the medical surveillance program.
- Maintaining records required by the program.
- Evaluating the program.
- Updating the written program as needed.

The Program Administrator for the City of Barre is the : Human Resources Administrator

Supervisors

Supervisors are responsible for ensuring that the respiratory protection program is implemented in their particular areas. In addition to being knowledgeable about the program requirements for their own protection, supervisors must also ensure that the program is understood and followed by the employees under their charge. Duties of the supervisor include:

- Ensuring that employees under their supervision (including new hires) have received appropriate training, fit testing, and annual medical evaluation.
- Ensuring the availability of appropriate respirators and accessories.
- Being aware of tasks requiring the use of respiratory protection.
- Enforcing the proper use of respiratory protection when necessary.



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- Ensuring that respirators are properly cleaned, maintained, and stored according to the respiratory protection plan.
- Ensuring that respirators fit well and do not cause discomfort.
- Continually monitoring work areas and operations to identify respiratory hazards.
- Coordinating with the Program Administrator on how to address respiratory hazards or other concerns regarding the program.

Employees

Each employee has the responsibility to wear his or her respirator when and where required and in the manner in which they were trained. Employees must also:

- Care for and maintain their respirators as instructed and store them in a clean sanitary location.
- Inform their supervisor if the respirator no longer fits well and request a new one that fits properly.
- Inform their supervisor or the Program Administrator of any respiratory hazards that they feel are not adequately addressed in the workplace and of any other concerns that they have regarding the program.

A. Program Elements

Selection Procedures

The Program Administrator will select respirators to be used on site, based on the hazards to which workers are exposed and in accordance with all OSHA standards.

The Program Administrator will conduct a hazard evaluation for each operation, process, or work area where airborne contaminants may be present in routine operations or during an emergency. The hazard evaluation will include:

1. Identification and development of a list of hazardous substances used in the workplace, organized by department or work process.
2. Review of work processes to determine where potential exposures to these hazardous substances may occur. This review will be conducted by surveying the workplace, reviewing process records, and talking with employees and supervisors.



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3. Exposure monitoring may be used to quantify potential hazardous exposures. Monitoring will be contracted out. Currently, materials used and the location of use limit employee exposures. As a result, industrial hygiene monitoring has not been used to document airborne exposures. Should the products or materials change, the need for air monitoring will be re-evaluated.

Street Division

Welding:

Street Sweeping:

Spray Finishing: Employees will use a spray gun on occasion to spray finish various pieces of heavy equipment and other metal parts. The product in use does not employ isocyanates or heavy metals – thus the primary exposure is to the carrier solvents. Performing these short-duration tasks outdoors limits air concentrations, allowing a half-mask to provide adequate respiratory protection.

Abrasive Blasting: An abrasive blasting helmet and breathing air compressor are rented and used to provide excellent respiratory protection. The compressor will always be located in an area free from airborne contaminants such as vehicle exhaust, chemical vapors, cigarette smoke, etc.

Water Treatment Facility

Transfer of Potassium Promagnate:

Waste Water Treatment Facility

Updating the Hazard Assessment

Any time work process changes may potentially affect exposure, the Program Administrator must review, update, and redistribute the hazard assessment. If an employee feels that respiratory protection is needed during a particular activity, he/she is to contact his or her supervisor, Program Administrator or submit “Request for Respirator Consideration” (Appendix A). The Program Administrator will evaluate the potential hazard, arranging for outside assistance as



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necessary. The Program Administrator will then communicate the results of that assessment back to the employees in writing. If it is determined that respiratory protection is necessary, all other elements of this program will be in effect for those tasks, and this program will be updated accordingly.

NIOSH Certification

All respirators must be certified by the National Institute for Occupational Safety and Health (NIOSH) and shall be used in accordance with the terms of that certification. Also, all filters, cartridges, and canisters must be labeled with the appropriate NIOSH approval label. The label must not be removed or defaced while it is in use.

Medical Evaluation

Employees who are either required to wear respirators, or who choose to wear an respirator voluntarily, must pass a medical evaluation before being permitted to wear a respirator on the job. Employees are not permitted to wear respirators until a physician has determined that they are medically able to do so. Any employee refusing the medical evaluation will not be allowed to work in an area requiring respirator use.

A licensed healthcare provider selected by the municipality (currently CVMC Occupational Medicine) will provide the medical evaluations. Medical evaluation procedures are as follows:

- The medical evaluation will be conducted using the questionnaire provided in Appendix B of 1910.134, the respiratory protection standard. The Program Administrator will provide a copy of this questionnaire to all employees requiring medical evaluations.
- To the extent feasible, the company will assist employees who are unable to read the questionnaire.
- All affected employees will be given a copy of the medical questionnaire to fill out, along with a stamped and addressed envelope for mailing the questionnaire to the reviewing healthcare provider designated by the municipality.
- Follow-up medical exams will be granted to employees as required by the standard, and/or as deemed necessary by the CVMC Occupational Medicine.
- All employees will be granted the opportunity to speak with the reviewing healthcare provider about their medical evaluation, if they so request.
- The Program Administrator has submitted a copy of this program and a copy of the Respiratory Protection standard to the reviewing healthcare provider.
- Any employee required for medical reasons to wear a positive pressure air purifying respirator will be provided with a powered air purifying respirator.



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- After an employee has received clearance and begun to wear his or her respirator, additional medical evaluations will be conducted under the following circumstances:
 - ♦ Employee reports signs and/or symptoms related to their ability to use a respirator, such as shortness of breath, dizziness, chest pains, or wheezing.
 - ♦ Information from this program, including observations made during fit testing and program evaluation, indicates a need for reevaluation.
 - ♦ A change occurs in workplace conditions that may result in an increased physiological burden on the employee.
 - ♦ Employee has significant changes in his/her physical condition, abilities, or fitness that could potentially impact his/her ability to safely use respiratory protection.

The employees currently subject to the medical evaluations are listed in Table 2 of this document. All examinations and questionnaires are to remain confidential between the employee and the physician.

Fit Testing

Fit testing is required for employees who are required to wear respirators.

Employees who are required to wear half-facepiece APRs will be fit tested as follows:

- prior to being allowed to wear any respirator with a tight fitting facepiece,
- annually, and
- when there are changes in the employee's physical condition that could affect respiratory fit (e.g., obvious change in body weight, facial scarring, etc.).

Employees will be fit tested with the make, model, and size of respirator that they will actually wear. Employees will be provided with several models and sizes of respirators so that they may find an optimal fit.

The Program Administrator will conduct fit tests following the OSHA approved **Bitrex** Solution Aerosol QLFT Protocol in Appendix B (B4) of the Respiratory Protection standard (29 CFR 1910.134).



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Respirator Use

Respiratory protection is required for the personnel listed in Table 2 below.

Table 2:

See Attached

General Use Procedures

- Employees will use their respirators under conditions specified by this program and in accordance with the training they receive on the use of each particular model. In addition, the respirator shall not be used in a manner for which it is not certified by NIOSH or by its manufacturer.
- All employees shall conduct user seal checks each time that they wear their respirator. Employees shall use either the positive or negative pressure check (depending on which test works best for them) specified in Appendix B-1 of the Respiratory Protection Standard.
- All employees shall be permitted to leave the work area to go to maintain their respirator for the following reasons: to clean their respirator if the respirator is impeding their ability to work, to change filters or cartridges, to replace parts, or to inspect respirator if it stops functioning as intended. Employees should notify their supervisor before leaving the area.
- Employees are not permitted to wear tight-fitting respirators if they have any condition, such as facial scars, facial hair, or missing dentures, that prevents them from achieving a good seal.
- Employees are not permitted to wear headphones, jewelry, or other articles that may interfere with the facepiece-to-face seal.

Care of Respirators When Not In Use

Cleaning

- Respirators are to be regularly cleaned and disinfected.
- Respirators issued for the exclusive use of an employee shall be cleaned as often as necessary.
- The following procedure is to be used when cleaning and disinfecting respirators:
 1. Disassemble respirator, removing any filters, canisters, or cartridges.



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2. Wash the facepiece and associated parts in a mild detergent with warm water. Do not use organic solvents.
3. Rinse completely in clean warm water.
4. Wipe the respirator with disinfectant wipes (70% Isopropyl Alcohol) to kill germs.
5. Air dry in a clean area.
6. Reassemble the respirator and replace any defective parts.
7. Place in a clean, dry plastic bag or other airtight container.

Note: The Program Administrator will ensure an adequate supply of appropriate cleaning and disinfection material at the cleaning station. If supplies are low, employees should contact their supervisor, who will inform the Program Administrator.

Maintenance

Respirators are to be properly maintained at all times in order to ensure that they function properly and adequately protect the employee. Maintenance involves a thorough visual inspection for cleanliness and defects. Worn or deteriorated parts will be replaced prior to use. No components will be replaced or repairs made beyond those recommended by the manufacturer. Repairs to regulators or alarms of atmosphere-supplying respirators will be conducted by the manufacturer.



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The following checklist will be used when inspecting respirators:

- Facepiece:
 - ♦ cracks, tears, or holes
 - ♦ facemask distortion
 - ♦ cracked or loose lenses/faceshield
- Headstraps:
 - ♦ breaks or tears
 - ♦ broken buckles
- Valves:
 - ♦ residue or dirt
 - ♦ cracks or tears in valve material
- Filters/Cartridges:
 - ♦ approval designation
 - ♦ gaskets
 - ♦ cracks or dents in housing
 - ♦ proper cartridge for hazard

Employees are permitted to leave their work area to perform limited maintenance on their respirator in a designated area that is free of respiratory hazards. Situations when this is permitted include: to wash their face and respirator facepiece to prevent any eye or skin irritation; to replace the filter, cartridge or canister; and if they detect vapor or gas breakthrough or leakage in the facepiece or any other damage to the respirator or its components.

Cartridge Change Schedules

Employees wearing APRs with organic vapor cartridges shall change the cartridges on their respirators at the first detection of a solvent odor. The cartridges shall also be replaced in accordance with the cartridge manufactures recommendations.

Storage

Respirators must be stored in a clean, dry area, and in accordance with the manufacturer's recommendations. Each employee will clean and inspect their own air-purifying respirator in accordance with the provisions of this program and will store their respirator in a plastic bag in their own locker or other designated area. Each employee will have his/her name on the bag and that bag will only be used to store that employee's respirator.



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The Program Administrator will insure that storage of the respirators, cartridges etc. is sufficient to maintain the quality of the components.

Training

The Program Administrator will provide training to respirator users and their supervisors on the contents of the City of Barre Respiratory Protection Program and their responsibilities under it, and on the OSHA Respiratory Protection standard. Workers will be trained prior to using a respirator in the workplace. Supervisors will also be trained prior to using a respirator in the workplace or prior to supervising employees who must wear respirators. The training course will cover the following topics:

- the City of Barre Respiratory Protection Program
- the OSHA Respiratory Protection standard
- respiratory hazards encountered at City of Barre and their health effects
- proper selection and use of respirators
- limitations of respirators
- respirator donning and user seal (fit) checks
- fit testing
- emergency use procedures
- maintenance and storage
- medical signs and symptoms limiting the effective use of respirators

Employees will be retrained as needed (e.g., if they change departments and need to use a different respirator). Respirator training will be documented by the Program Administrator. The documentation will include the type, model, and size of respirator for which each employee has been trained and fit tested.

PROGRAM ADMINISTRATION

The Program Administrator will conduct periodic evaluations of the workplace to ensure that the provisions of this program are being implemented. The evaluations will include regular consultations with employees who use respirators and their supervisors, site inspections, air monitoring, and a review of records.

Problems identified will be noted in an inspection log and addressed by the Program Administrator. These findings will be reported to management, and the report will list plans to correct deficiencies in the respirator program and target dates for the implementation of those corrections.



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DOCUMENTATION AND RECORDKEEPING

A written copy of this program and the OSHA standard is kept in the Program Administrator's office and is available to all employees who wish to review it.

Also maintained in the Program Administrator's office are copies of training and fit test records. These records will be updated as new employees are trained, as existing employees receive refresher training, and as new fit tests are conducted.

The Program Administrator will also maintain copies of the medical records for all employees covered under the respirator program. The completed medical questionnaire and the physician's documented findings are confidential and will remain with the medical provider that conducted the evaluation. The municipality will only retain the physician's written recommendation regarding each employee's ability to wear a respirator.