

Respirator Program

(29CFR 1910.134)

In order to comply with OSHA Standard 29CFR 1910.134, Respirator Standard, the following written respirator program has been established for Quabbin, Inc. The written program will be available in Quabbin's office area for review by any interested employee.

TABLE OF CONTENTS

1. Program Summary	3
2. Purpose	5
3. Scope and Application	6
Respirator Use	7
4. Responsibilities	8
Program Administrator	8
Supervisors	9
Employees	10
5. Respirator Selection	11
Quabbin's Hazard Assessment	12
6. Medical Evaluation	13
7. Fit Testing	15
8. Appendix A to 1910.134 - Fit Testing Procedures	16
9. Respirator Use	23
General Use Procedures	23
Use Instructions	24
Use Limitations	25
Time Use Limitations	25
Cautions	26
Fitting Instructions	27
Appendix B-1 to 1910.134 - User Seal-Check Procedures	28
Emergency Procedures	30
Respirator Malfunction	31
IDLH Procedures	31
10. Respirator Care	32
Inspection	32
Cleaning	33
Appendix B-2 to 1910.134 - Respirator Cleaning Procedure	34
Replacement of Respirator Parts	35
Maintenance	37
Change Schedules	38
Storage	38
Defective Respirators	38
11. Training	39
12. Program Evaluation	40
13. Documentation and Record Keeping	40
14. Voluntary Respiratory Use	40
15. Appendix A – Acronyms	41
16. Employee Training Attendance Sheet	42
17. Acknowledgement of Training in the Use of Respirators	43
18. Request for Voluntary Use of a Respirator	44
19. Appendix C to 1910.134 - Respirator Medical Evaluation Questionnaire	45

1. Program Summary

This is to certify that Mark LeBoeuf, President, of Quabbin, Inc., have evaluated Quabbin's facilities at 158 Governor Dukakis Drive, Orange, MA 01364 on July 2, 2013, in order to determine if respirators are required and, if so, what specific types are required. The workplace was evaluated for the following airborne hazards:

1. **Dusts** - Solid particles created by sanding, grinding, sawing, etc.
2. **Mists** - Liquid particles created by spraying, mixing, etc.
3. **Fumes** - Small metal particles created by welding, smelting, or pouring molten metal.
4. **Gases** - Examples include Chlorine, Ammonia, Sulfur Dioxide, Hydrogen Sulfide, and Carbon Monoxide.
5. **Vapors** - Produced when liquids evaporate, e.g. Solvent Vapors.
6. **Oxygen-Deficient Atmospheres** - defined by OSHA as air with less than 19.5% oxygen; may be found in certain confined spaces and/or if oxygen is displaced by other gases or vapors, e.g. in silos, degreasing tanks.

It was determined that respirators were not currently required for the protection of employees and instead that a filtering facepiece (dust mask) was all that was required. However, due to the number of employees that would rather wear a half mask respirator instead of a filtering facepiece, Quabbin has implemented this program to cover the voluntary use of respirators.

OSHA and other groups publish occupational exposure limits for many contaminants. If the contaminant concentration in the air is above the exposure limit, the best choice is to use a safer material, enclose the process, install local exhaust ventilation or limit the amount of time employees are in the area. While respirators are designed to help reduce exposure to certain airborne contaminants, they are only intended to be used while the above control measures are being implemented, or if they are not feasible. Quabbin's Program Administrator will work to implement safeguards that will reduce the respiratory hazards of its employees.

Certain airborne contaminants are only dangerous to the lungs, but they may also be inhaled and distributed throughout the rest of the body. Some effects may be noticed immediately, while others may not produce health effects until years later. Employees should consult the Material Safety Data Sheets (MSDS) for the contaminant or consult their supervisor, safety officer, program administrator or Human Resources for more information.

OSHA requires that the respirator program meet the following minimum requirements to be in compliance with 29CFR 1910.134.

1. Written program with site-specific procedures.
2. Medical evaluations for employees (not required for voluntary use of Filtering Facepiece respirators).
3. Annual fit testing of tight-fitting respirators (not required for voluntary use of Filtering Facepiece respirators).
4. User seal checks of tight fitting respirators prior to each use.
5. Procedures for use in routine and emergency situations.
6. Cleaning, maintenance, inspection and storage of respirators.
7. Training of employees (“Appendix D” to 29 CFR 1910.134 is available for voluntary use of respirators).
8. Evaluation of respirator program effectiveness.

2. Purpose

Quabbin, Inc. has determined that employees in the Powder Coating and Grinding and Die Cutting Departments may be exposed to respiratory hazards during routine operations. The hazards found at Quabbin are only of a nuisance level and do not require a respirator. Quabbin, Inc. does not have any processes that expose employees to respiratory hazards that could represent Immediately Dangerous to Life or Health (IDLH) conditions. The following hazards were found during our inspection:

1. Metal dust from Cleaning operations.
2. Wood dust during Sawing operations.
3. Metal dust during Grinding operations.
4. Metal dust during Shot Blasting operations and Shot Waste Disposal.
5. Powder dust during Powder Coating operations.

While a dust mask is an effective method of protection against the above hazards when properly selected and worn, some employees may prefer a respirator. Employees who voluntarily request to use a respirator will fall under Quabbin's Respirator Program. Quabbin's Program Administrator will continue to inspect the facility for new hazards that require additional respiratory protection. The purpose of this program is to ensure that all employees are protected from exposure to these respiratory hazards.

The work processes requiring respirator use at Quabbin, Inc. are outlined below in the Scope and Application section of this program.

3. Scope and Application

This program applies to all employees who **volunteer or are required** to wear Half Facepiece respirators during normal work operations, and during some non-routine or emergency operations. The requirements for voluntary respirator use are explained in Section 14 of this document.

Quabbin, Inc. provides the following types of approved National Institute for Occupational Safety and Health (NIOSH) respirators for its employees.

1. Filtering Facepiece (dust mask) with N95 Filtering: the filter is an integral part of the facepiece.
2. Half Facepiece with P100 Filters: the respirator covers the mouth and nose.

Particle filters are designed to filter various types of particles. Filtering facepiece respirators and filters for negative pressure respirators are rated by NIOSH both according to their filtration efficiency and whether or not they are designed to filter oily mists. The following classification is used:

1. N – Not for oil mists (e.g. cutting fluids, grinding fluids)
2. R – Oil Resistant (use up to 8 hours against oily mists)
3. P – Oil Proof (employees should see time limitations from manufacturer)
4. 95, 99 or 100 – are assigned for minimum filtration efficiencies of 95%, 99% or 99.97% respectively (OSHA requires 100 level filters for lead, cadmium, asbestos, arsenic and 4,4'-Methylenedianiline MDA)

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 paid by the employer.

RESPIRATOR USE

Quabbin, Inc.

The following Respiratory PPE is required for this operation or work area:

Department: Throughout the Shop

Respirator Type

Hazard (Protection against)

Filtering Facepiece (Dust Mask)

Metal dust during cleaning operations

Department: Die Cutting

Respirator Type

Hazard (Protection against)

Filtering Facepiece (Dust Mask)

Wood dust during sawing operations

Department: Grinding

Respirator Type

Hazard (Protection against)

Filtering Facepiece (Dust Mask)

Metal dust during grinding operations

Department: Powder Coating

Respirator Type

Hazard (Protection against)

Filtering Facepiece (Dust Mask)

1. Powder dust during Powder Coating Operations
2. Metal dust during Shot Blasting Operations
3. Metal dust during Shot Waste Disposal

4. Responsibilities

Program Administrator

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

1. Identifying work areas, processes or tasks that require workers to wear respirators.
2. Selecting respiratory protection options.
3. Monitoring respirator use to ensure that respirators are used in accordance with their certifications.
4. Arranging for and/or conducting training.
5. Ensuring proper storage and maintenance of respiratory protection equipment.
6. Conducting qualitative fit testing.
7. Administering the medical surveillance program.
8. Maintaining records required by the program.
9. Evaluating the program.
10. Updating written program as needed.

The Program Administrator for Quabbin, Inc. is Mark LeBoeuf.

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:

1. Ensuring that employees under their supervision (including new hires) have received appropriate training, fit testing, and annual medical evaluation.
2. Ensuring the availability of appropriate respirators and accessories.
3. Being aware of tasks requiring the use of respiratory protection.
4. Enforcing the proper use of respiratory protection when necessary.
5. Ensuring that respirators are properly cleaned, maintained, and stored according to the respiratory protection plan.
6. Ensuring that respirators fit well and do not cause discomfort.
7. Continually monitoring work areas and operations to identify respiratory hazards.
8. Coordinating with the Program Administrator on how to address respiratory hazards or other concerns regarding the program.

Supervisors receive respiratory training during monthly Safety Meetings at Quabbin, Inc. Training is provided by Mark LeBoeuf, the Respirator Program Administrator. The following are supervisors at Quabbin, Inc.:

Jammie Vincent
Hugh Mackay

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:

1. Care for and maintain their respirators as instructed and store them in a clean sanitary location.
2. Inform their supervisor if the respirator no longer fits well and request a new one that fits properly.
3. 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.

5. Respirator Selection

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 during 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 by department or work process.
2. Review of work processes to determine where potential exposures to these hazardous substances may occur. This review shall be conducted by surveying the workplace, reviewing process records, and talking with employees and supervisors.
3. Exposure monitoring to quantify potential hazardous exposures. Monitoring will be conducted by OSHA.

The results of Quabbin's current hazard evaluation are the following:

Quabbin's Hazard Assessment – 06 January, 2010

<u>Department/Process</u>	<u>Contaminant</u>	<u>Exposure Level</u>	<u>Exposure Limit</u>	<u>Controls</u>
Throughout the Shop Cleaning Operations	Metal Dust Nuisance Level Dust	< 5 mg/Cu Meter	5 mg/Cu Meter	Filtering Facepiece N95 Dust Mask
Die Cutting Department Sawing Operations	Wood Dust Nuisance Level Dust	< 5 mg/Cu Meter	5 mg/Cu Meter	Filtering Facepiece N95 Dust Mask
Grinding Department Grinding Operations	Metal Dust Nuisance Level Dust	< 5 mg/Cu Meter	5 mg/Cu Meter	Filtering Facepiece N95 Dust Mask
Powder Coating Department Powder Coating Operations	Powder Dust Nuisance Level Dust	< 5 mg/Cu Meter	5 mg/Cu Meter	Filtering Facepiece N95 Dust Mask
Powder Coating Department Shot Blasting Operations	Metal Dust Nuisance Level Dust	< 5 mg/Cu Meter	5 mg/Cu Meter	Filtering Facepiece N95 Dust Mask
Powder Coating Department Shot Waste Disposal Operations	Metal Dust Nuisance Level Dust	< 5 mg/Cu Meter	5 mg/Cu Meter	Filtering Facepiece N95 Dust Mask

The Program Administrator will update the hazard assessment as needed in the case of a change in work process and/or new procedure. If an employee feels that respiratory protection is needed for a particular process, s/he should contact his/her supervisor or the Program Administrator. The Program Administrator will evaluate the process and will then communicate the results of the assessment back to the employees.

6. Medical Evaluation

Employees are not permitted to wear respirators unless a physician or other licensed healthcare professional (PLHCP) 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 physician or other licensed healthcare professional will provide the medical evaluations at the office noted below:

Orange Pulmonary and Internal Medicine

Dr. Mohsen Noreldin, M.D., M.P.H.

450 West River Street – Suite 5

Orange, MA 01364

Phone: 978-544-1505

Fax: 978-544-1554

Medical evaluation procedures are as follows:

1. The medical evaluation will be conducted using the questionnaire provided in Appendix C of the respiratory protection standard. The Program Administrator will provide a copy of this questionnaire to all employees requiring medical evaluations.
2. To the extent feasible, Quabbin will assist employees who are unable to read the questionnaire (by providing help in reading the questionnaire). When this is not possible, the employee will be sent directly to the PLHCP for medical evaluation.
3. The confidentiality of the employees being evaluated must be protected. This can be done, for example, by supplying affected employees a copy of the medical questionnaire to fill out along with a stamped pre-addressed envelope for mailing to the company PLHCP. Employees will be permitted to fill out the questionnaire on company time.
4. Follow-up medical exams will be granted to employees as required by the standard and/or as deemed necessary by the PLHCP.
5. All employees will be granted the opportunity to speak with the PLHCP about their medical evaluation, if they so request.

The Program Administrator will provide the PLHCP with a copy of this program, a copy of the Respiratory Protection standard, the list of hazardous substances by work area, and the following for each employee requiring evaluation:

1. The employee's work area or job title.
2. Proposed respirator type and weight.
3. Length of time required to wear respirator.
4. Expected physical workload while wearing respirator (light, moderate, or heavy).
5. Potential temperature and humidity extremes.
6. Additional protective clothing required.

Any employee required for medical reasons to wear a positive pressure air purifying respirator will be provided with a powered air-purifying respirator.

After an employee has received clearance and begun to wear his or her respirator, additional medical evaluations will be provided under the following circumstances:

1. Employee reports signs and/or symptoms related to their ability to use a respirator, such as shortness of breath, dizziness, chest pains, or wheezing.
2. The PLHCP or supervisor informs the Program Administrator that the employee needs to be reevaluated.
3. Observations made during fit testing and program evaluation indicate a need for reevaluation.
4. A change occurs in workplace conditions that may result in an increased physiological burden on the employee.

All examinations and questionnaires are to remain confidential between the employee and the PLHCP.

The following employees are currently enrolled in the Respiratory Protection Program:

- 1.
- 2

7. Fit Testing

The effectiveness of a respirator will be reduced if it is not fitted properly. Employees who are required to wear respirators will be fit-tested:

1. Prior to being allowed to wear any respirator with a tight fitting facepiece.
2. Annually.
3. When there are changes in the employee's physical condition that could affect the respirator's fit (e.g., obvious change in body weight, facial scarring, facial hair, 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. Fit testing should be conducted using the heaviest filter that the wearer will use in their work environment. Respirators should be fit tested while wearing any personal protective equipment (PPE) the wearer may use in their work environment that may affect the fit of the respirator (e.g. hoods, hardhats, safety glasses, hearing protection, etc.)

The Program Administrator will conduct fit tests using the 3M FT30 Qualitative Fit Test Apparatus (bitter).

29 CFR 1910.34(e)(5) states, in part that training shall provide employees an opportunity to:

1. Handle the respirator.
2. Have it fitted properly.
3. Test its face-piece-to-face seal.
4. Wear it in normal air for a long familiarity period.
5. Wear it in a test atmosphere.

Respirator fit tests must be conducted as follows:

1. A "test atmosphere" must be applied to assess the quality of fit.
2. The fit-test must be applied to each and every employee required to wear a respirator.
3. The fit-testing requirement applies to all negative pressure respirators including SINGLE-USE RESPIRATORS.
4. The "test atmosphere" must be applied using recognized, qualitative, fit-testing procedures utilizing iso-amyl acetate, irritant smoke, etc.; or quantitative fit testing using DOP, NaCl, etc.
5. Items 1-4 above shall be part of the training required in 29 CFR 1910.134(b)(3), "The user shall be instructed and trained in the proper use of respirators and their limitations."

8. Appendix A to § 1910.134

Fit Testing Procedures (Mandatory)

Part I. OSHA-Accepted Fit Test Protocols

A. Fit Testing Procedures -- General Requirements

The employer shall conduct fit testing using the following procedures. The requirements in this appendix apply to all OSHA-accepted fit test methods, both QLFT and QNFT.

1. The test subject shall be allowed to pick the most acceptable respirator from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.
2. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This instruction may not constitute the subject's formal training on respirator use because it is only a review.
3. The test subject shall be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.
4. The test subject shall be instructed to hold each chosen facepiece up to the face and eliminate those that obviously do not give an acceptable fit.
5. The more acceptable facepieces are noted in case the one selected proves unacceptable; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the points in the following (item A.6). If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.
6. Assessment of comfort shall include a review of the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:
 - (a) Position of the mask on the nose
 - (b) Room for eye protection
 - (c) Room to talk
 - (d) Position of mask on face and cheeks

7. The following criteria shall be used to help determine the adequacy of the respirator fit:

- (a) Chin properly placed
- (b) Adequate strap tension, not overly tightened
- (c) Fit across nose bridge
- (d) Respirator of proper size to span distance from nose to chin
- (e) Tendency of respirator to slip
- (f) Self-observation in mirror to evaluate fit and respirator position

8. The test subject shall conduct a user seal check, either the negative and positive pressure seal checks described in Appendix B-1 of this section or those recommended by the respirator manufacturer which provide equivalent protection to the procedures in Appendix B-1. Before conducting the negative and positive pressure checks, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. Another facepiece shall be selected and retested if the test subject fails the user seal check tests.

9. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard, mustache or sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed.

10. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician or other licensed health care professional, as appropriate, to determine whether the test subject can wear a respirator while performing her or his duties.

11. If the employee finds the fit of the respirator unacceptable, the test subject shall be given the opportunity to select a different respirator and to be retested.

12. Exercise regimen: Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure. The description of the process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.

13. The fit test shall be performed while the test subject is wearing any applicable safety equipment that may be worn during actual respirator use and which could interfere with respirator fit.

14. Test Exercises:

(a) Employers must perform the following test exercises for all fit testing methods prescribed in this appendix. For proper fit testing, employers must ensure that employees perform the test exercises in the appropriate test environment in the following manner:

(1) Normal breathing. In a normal standing position, without talking, the subject shall breathe normally.

(2) Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.

(3) Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.

(4) Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).

(5) Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text, such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.

(6) Bending over. The test subject shall bend at the waist as if he/she were to touch his/her toes. Jogging in place shall be substituted for this exercise in those test environments such as QLFT units that do not permit bending over at the waist.

(7) Normal breathing. Same as exercise (1).

(b) Each test exercise shall be performed for one minute, except for the grimace exercise which shall be performed for 15 seconds. The test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried. The respirator shall not be adjusted once the fit test exercises begin. Any adjustment voids the test, and the fit test must be repeated.

(c) The test is terminated at any time the bitter taste of aerosol is detected by the employee because this indicates an inadequate fit. Wait 15 minutes and perform the sensitivity test again.

(d) Repeat the fit test after redonning and readjusting the respirator. A second failure may indicate that a different size or model respirator is needed.

(e) If the entire test is completed without the subject detecting the bitter taste of the aerosol, the test is successful and respirator fit has been demonstrated.

(f) Periodically check to nebulizer to make sure that it is not clogged. If clogging is found, clean the nebulizer and retest.

B. Qualitative Fit Test (QLFT) Protocols

1. General

(a) The employer shall ensure that persons administering QLFT are able to prepare test solutions, calibrate equipment and perform tests properly, recognize invalid tests, and ensure that test equipment is in proper working order.

(b) The employer shall ensure that QLFT equipment is kept clean and well maintained so as to operate within the parameters for which it was designed.

2. Bitrex™ (Denatonium Benzoate) Solution Aerosol Qualitative Fit Test Protocol

The Bitrex™ (Denatonium benzoate) solution aerosol QLFT protocol uses the published saccharin test protocol because that protocol is widely accepted. Bitrex is routinely used as a taste aversion agent in household liquids, which children should not be drinking and is endorsed, by the American Medical Association, the National Safety Council, and the American Association of Poison Control Centers. The entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

(a) Taste Threshold Screening.

The Bitrex taste threshold screening, performed without wearing a respirator, is intended to determine whether the individual being tested can detect the taste of Bitrex.

- (1) During threshold screening as well as during fit testing, subjects shall wear an enclosure about the head and shoulders that is approximately 12 inches (30.5 cm) in diameter by 14 inches (35.6 cm) tall. The front portion of the enclosure shall be clear from the respirator and allow free movement of the head when a respirator is worn. An enclosure substantially similar to the 3M hood assembly, parts FT-14 and FT-15 combined, is adequate.
- (2) The test enclosure shall have a 3/4-inch (1.9 cm) hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle.
- (3) The test subject shall don the test enclosure. Throughout the threshold-screening test, the test subject shall breathe through his or her slightly open mouth with tongue extended. The subject is instructed to report when he/she detects a bitter taste
- (4) Using a DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent, the test conductor shall spray the Threshold Check Solution into the enclosure. This Nebulizer shall be clearly marked to distinguish it from the fit test solution nebulizer.
- (5) The Threshold Check Solution is prepared by adding 13.5 mg of Bitrex to 100 ml of 5% salt (NaCl) solution in distilled water.

- (6) To produce the aerosol, the nebulizer bulb is firmly squeezed so that the bulb collapses completely, and is then released and allowed to fully expand.
- (7) An initial ten squeezes are repeated rapidly and then the test subject is asked whether the Bitrex can be tasted. If the test subject reports tasting the bitter taste during the ten squeezes, the screening test is completed. The taste threshold is noted as ten regardless of the number of squeezes actually completed.
- (8) If the first response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the Bitrex is tasted. If the test subject reports tasting the bitter taste during the second ten squeezes, the screening test is completed. The taste threshold is noted as twenty regardless of the number of squeezes actually completed.
- (9) If the second response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the Bitrex is tasted. If the test subject reports tasting the bitter taste during the third set of ten squeezes, the screening test is completed. The taste threshold is noted as thirty regardless of the number of squeezes actually completed.
- (10) The test conductor will take note of the number of squeezes required to solicit a taste response.
- (11) If the Bitrex is not tasted after 30 squeezes (step 10), the test subject is unable to taste Bitrex and may not perform the Bitrex fit test.
- (12) If a taste response is elicited, the test subject shall be asked to take note of the taste for reference in the fit test.
- (13) Correct use of the nebulizer means that approximately 1 ml of liquid is used at a time in the nebulizer body.
- (14) The nebulizer shall be thoroughly rinsed in water, shaken to dry, and refilled at least each morning and afternoon or at least every four hours.

(b) Bitrex Solution Aerosol Fit Test Procedure.

- (1) The test subject may not eat, drink (except plain water), smoke, or chew gum for 15 minutes before the test.
- (2) The fit test uses the same enclosure as that described above.
- (3) The test subject shall don the enclosure while wearing the respirator selected according to section I. A. of this appendix. The respirator shall be properly adjusted and equipped with any type particulate filter(s).
- (4) A second DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent is used to spray the fit test solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the screening test solution nebulizer.
- (5) The fit test solution is prepared by adding 337.5 mg of Bitrex to 200 ml of a 5% salt (NaCl) solution in warm water.
- (6) As before, the test subject shall breathe through his or her slightly open mouth with tongue extended, and be instructed to report if he/she tastes the bitter taste of Bitrex.
- (7) The nebulizer is inserted into the hole in the front of the enclosure and an initial concentration of the fit test solution is sprayed into the enclosure using the same number of squeezes (either 10, 20 or 30 squeezes) based on the number of squeezes required to elicit a taste response as noted during the screening test.
- (8) After generating the aerosol, the test subject shall be instructed to perform the exercises in section I. A. 14. of this appendix.
- (9) Every 30 seconds the aerosol concentration shall be replenished using one half the number of squeezes used initially (5, 10 or 15).
- (10) The test subject shall indicate to the test conductor if at any time during the fit test the taste of Bitrex is detected. If the test subject does not report tasting the Bitrex, the test is passed.
- (11) If the taste of Bitrex is detected, the fit is deemed unsatisfactory and the test is failed. A new respirator shall be tried and the both the taste threshold and fit testing will be repeated.

9. Respirator Use

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. Employees will receive seal check training during a monthly Safety Meeting by the Program Administrator, Mark LeBoeuf.

All employees shall be permitted to leave the work area to maintain their respirator for the following reasons:

1. To clean their respirator if the respirator is impeding their ability to work.
2. To change filters or cartridges.
3. To replace damaged parts.
4. To inspect the 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.

Use Instructions

The following instructions will be incorporated into the Respirator Protection Program training:

1. Failure to follow all instructions and limitations on the use of respirators and/or failure to wear the respirator during all times of exposure can reduce respirator effectiveness and **may result in sickness or death.**
2. Before occupational use of a respirator is allowed at Quabbin, Inc., a written respiratory protection program must be implemented meeting all the requirements of OSHA 29 CFR 1910.134 such as training, medical evaluations, and fit testing.
3. Airborne contaminants which can be dangerous to your health may include those, that are so small you cannot see or smell them.
4. Leave contaminated area immediately and contact a supervisor if you smell or taste contaminants or if dizziness, irritation, or other distress occurs.
5. Store Respirators away from contaminated areas when not in use.
6. Dispose of used product in accordance with applicable regulations.

Use Limitations

The following limitations will be incorporated into the Respirator Protection Program training:

1. Respirators that Quabbin currently purchases do not supply oxygen when used in air purifying mode. Do not use in atmospheres containing less than 19.5% oxygen.
2. Do not use when concentrations are immediately dangerous to life or health, are unknown or when concentrations exceed 10 times the permissible exposure limit (PEL) when used in air-purifying mode.
3. Do not alter, abuse or misuse the respirators.
4. Do not use with beards or other facial hair or other condition that prevents a good seal between the face and the faceseal of the respirator.

Time Use Limitations

1. If a respirator becomes damaged, leave the contaminated area immediately and repair or replace the respirator.
2. Replace filters in accordance with the filter Time Use Limitation.
3. Replace filters in accordance with an established change schedule or earlier if smell, taste or irritation from contaminants is detected.

Cautions

The following cautions will be incorporated into the Respirator Protection Program training:

1. Do not use in atmospheres containing less than 19.5% oxygen.
2. Do not use in atmospheres immediately dangerous to life or health.
3. Do not exceed maximum use concentrations established by regulatory standards.
4. Follow established filter change schedules.
5. Failure to properly use and maintain your respirator **could result in injury or death.**
6. Follow the manufacturer's User's Instructions for changing filters and replacing defective components.
7. All approved respirators shall be selected, fitted, used, and maintained in accordance with OSHA and other applicable regulations.
8. Never substitute, modify, add, or omit parts. Use only exact replacement parts in the configuration as specified by the manufacturer.
9. Refer to User's Instructions, and/or maintenance manuals for information on use and maintenance of respirators.
10. Failure to dispose of spent filters or respirators contaminated by hazardous materials can result in environmental harm. Handling, transportation, and disposal of spent filters or respirators must comply with all applicable federal, state and local laws and regulations.

Fitting Instructions

The following fitting instructions **must be followed each time a respirator is worn** and will be incorporated into the Respirator Protection Program training:

Donning Respirator

1. Place respirator over your eyes and nose, then pull head harness over the crown of your head.
2. Take bottom straps in both hands, place them in back of your neck and hook them together.
3. Position facepiece low on the bridge of your nose for optimal visibility and best fit.
4. Adjust top straps first, and then lower neck straps by pulling on the ends. Do not pull too tight! (Strap tension may be decreased by pushing out on the backside of the buckles.) Perform a positive pressure and/or negative pressure user seal check. The positive pressure method is recommended.
5. **If you cannot achieve a proper fit, DO NOT enter the contaminated area. See your supervisor for instruction.**

Always check the seal of the respirator on your face before entering a contaminated area.

Note: Do not use with beards or other facial hair or other conditions that prevent a good seal between the face and the faceseal of the respirator. To help maintain a good seal between the face and the faceseal all hair, hoods or other equipment must be kept out of the respirator faceseal area at all times.

Appendix B-1 to § 1910.134

User Seal-Check Procedures

The individual who uses a tight-fitting respirator is to perform a user seal check to ensure that an adequate seal is achieved each time the respirator is put on. Either the positive and negative pressure checks listed in this appendix, or the respirator manufacturer's recommended user seal check method shall be used. User seal checks are not substitutes for qualitative or quantitative fit tests.

Note: Before assigning any respirator to be worn in a contaminated area, a qualitative or quantitative fit test must be performed per OSHA Standard 1910.134.

1. Facepiece Positive and/or Negative Pressure Checks

- A. Positive pressure check.** Close off the exhalation valve and exhale gently into the facepiece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the facepiece without any evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replace it after the test.

If faceseal air leakage is detected, reposition respirator on your face and/or readjust tension of the elastic straps to eliminate leakage.

Repeat above steps until a tight faceseal is obtained.

If you cannot achieve a proper fit, DO NOT enter the contaminated area. See your supervisor for instruction.

B. **Negative pressure check.** Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s). Inhale gently so that the facepiece collapses slightly and hold the breath for ten seconds. The design of the inlet opening of some cartridges cannot be effectively covered with the palm of the hand. The test can be performed by covering the inlet opening of the cartridge with a thin latex or nitrile glove. If the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

If faceseal air leakage is detected, reposition respirator on your face and/or readjust tension of the elastic straps to eliminate leakage.

Repeat above steps until a tight faceseal is obtained.

If you cannot achieve a proper fit, DO NOT enter the contaminated area. See your supervisor for instruction.

2. Manufacturer's Recommended User Seal Check Procedures

The respirator manufacturer's recommended procedures for performing a user seal check may be used, instead of the positive and/or negative pressure check procedures, provided that the employer demonstrates that the manufacturer's procedures are equally effective.

Emergency Procedures

The following work areas have been identified as having foreseeable emergencies:

Quabbin, Inc. does not have any work areas or processes that would require emergency respirators.

Emergency Procedures are as follows:

When an emergency is communicated over the PA system, employees in the affected department must immediately shut down their process equipment, and exit the work area. All other employees must immediately evacuate the building.

The Emergency Action Plan describes these procedures (including proper evacuation routes and rally points) in greater detail.

Emergency escape respirators:

Quabbin, Inc. does not provide emergency escape respirators.

Employees are not trained as emergency responders, and are not authorized to act in such a manner.

Respirator Malfunction

1. APR (Air-purifying respirator) Malfunction:

For any malfunction of an APR (e.g., such as breakthrough, facepiece leakage, or improperly working valve), the respirator wearer should inform his or her supervisor that the respirator no longer functions as intended, and go to the designated safe area to maintain the respirator. The supervisor must ensure that the employee receives the needed parts to repair the respirator, or is provided with a new respirator.

2. Atmosphere-supplying Respirator Malfunction (**Not Currently Used at Quabbin, Inc.**)

Immediately Dangerous to Life and Health (IDLH) Procedures

The Program Administrator has identified the following area as presenting the potential for IDLH conditions:

Quabbin, Inc. does not currently have any areas of the facility or processes that have the potential for IDLH conditions.

10. Respirator Care

Inspection

Respirator facepieces must be inspected before each use to ensure that it is in good working condition. Any damaged or defective parts must be replaced before use. The following inspection procedure is recommended.

1. Check facepiece for cracks, tears and dirt. Be certain facepiece, especially face seal area, is not distorted.
2. Examine inhalation valves for signs of distortion, cracking and tearing.
3. Make sure that head straps are intact and have good elasticity.
4. Examine all plastic parts for signs of cracking or fatiguing. Make sure filter gaskets are properly seated and in good condition.
5. Remove exhalation valve cover and examine exhalation valve and valve seat for signs of dirt, distortion, cracking or tearing. Replace exhalation valve cover.

Cleaning

Respirators are to be regularly cleaned and disinfected at the designated respirator cleaning station located in the employee wash area. All Respirators at Quabbin are issued for the exclusive use of an employee and shall be cleaned as often as necessary, but at least once a day.

The following procedure is to be used when cleaning and disinfecting respirators:

1. Disassemble respirator, removing any filters, canisters, or cartridges.
2. Wash the facepiece and associated parts in a mild detergent with warm water and scrub with a soft brush until clean. Do not use organic solvents.
4. Rinse completely in clean warm water.
5. Wipe the respirator with disinfectant wipes (70% Isopropyl Alcohol) to kill germs.
6. Air dry in a clean non-contaminated atmosphere.
7. Reassemble the respirator and replace any defective parts.
8. Place in a clean, dry, plastic bag or other airtight container away from contaminated areas when not in use.
9. The cleaned respirator should be stored away from contaminated areas when not in use.
- 10. NOTE: do not clean with solvents. Cleaning with solvents may degrade some respirator components and reduce respirator effectiveness. Inspect all respirator components before each use to ensure proper operating condition. Failure to do so may result in sickness or death.**

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.

Appendix B-2 to § 1910.134

Respirator Cleaning Procedures (Mandatory)

These procedures are provided for employer use when cleaning respirators. They are general in nature, and the employer as an alternative may use the cleaning recommendations provided by the manufacturer of the respirators used by their employees, provided such procedures are as effective as those listed here in Appendix B- 2. Equivalent effectiveness simply means that the procedures used must accomplish the objectives set forth in Appendix B-2, i.e., must ensure that the respirator is properly cleaned and disinfected in a manner that prevents damage to the respirator and does not cause harm to the user.

I. Procedures for Cleaning Respirators

1. Remove filters, cartridges, or canisters. Disassemble facepieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
2. Wash components in warm (43 deg. C [110 deg. F] maximum) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
3. Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), preferably running water. Drain.
4. When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:
 - A. Hypochlorite solution (50 ppm of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of water at 43 deg. C (110 deg. F).
 - B. Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6-8 grams ammonium and/or potassium iodide/100 cc of 45% alcohol) to one liter of water at 43 deg. C (110 deg. F).
 - C. Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.
5. Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), preferably running, water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
6. Components should be hand-dried with a clean lint-free cloth or air-dried.
7. Reassemble facepiece, replacing filters, cartridges, and canisters where necessary.
8. Test the respirator to ensure that all components work properly.

Replacement of Respirator Parts

Respirators that require replacement parts will be brought to the Program Administrator for evaluation. Quabbin employees will be only allowed to perform basic repairs on their respirators with the help of the Program Administrator. Only new manufacturer's replacement parts will be used to make repairs. The correct method of replacement of the following components will be taught to the employees as part of this training program:

Inhalation Valve

Inhalation valves are located on posts at the inside of the facepiece inhalation port. These valves should be inspected before each respirator use and replaced whenever valves become damaged or lost.

1. Remove existing valves by lifting from posts.
2. Install new valves on posts. Be certain valves are fully engaged under all three lugs on posts, lay flat and move freely (spin) on post.
3. Perform a Positive and/or a Negative Pressure Seal Check prior to putting the respirator back in service to ensure the inhalation valves are functioning properly.
4. **If you cannot achieve a proper fit, DO NOT enter a contaminated area. See your supervisor.**

Exhalation Valve

The exhalation valve is located under the valve cover assembly on a post at the front of the facepiece. This valve should be inspected periodically and replaced whenever valves become damaged or lost.

1. Remove valve cover assembly from facepiece exhalation port.
2. Grasp valve and pull valve stem out from valve seat.
3. Inspect valve seat making certain it is clean and in good condition.
4. Place new valve over exhalation port and press valve stem into center hole. Be certain the valve is fully seated and spins freely in its mount.
5. Replace valve cover assembly.
6. Perform a Positive and/or a Negative Pressure Seal Check prior to putting the respirator back in service to ensure the exhalation valve is functioning properly.
7. **If you cannot achieve a proper fit, DO NOT enter a contaminated area. See your supervisor.**

Inhalation Gasket Replacement

The closed cell foam rubber gasket is designed to seal the interface between the bayonet attachment inhalation ports on the facepiece and filters. The gaskets should be inspected with each filter change and replaced whenever damaged, lost or seal integrity is questionable.

1. Remove existing gaskets from facepiece inhalation port bayonet fittings.
2. Install new gaskets onto facepiece inhalation port bayonet fittings. Be certain gaskets are in proper position under all three lugs on posts, lay flat and move freely (spin) on post.
3. Perform a Positive and/or a Negative Pressure Seal Check prior to putting the respirator back in service to ensure the inhalation gaskets are functioning properly.
4. **If you cannot achieve a proper fit, DO NOT enter a contaminated area. See your supervisor.**

Respirator Strap Assembly

The Respirator Strap Assembly is located as part of the valve cover assembly at the front of the facepiece. The Strap Assembly should be inspected before each respirator use and replaced whenever straps become damaged or lost.

1. To remove Strap Assembly, disengage upper legs of the valve cover assembly from facepiece buttons.
2. Remove valve cover assembly from facepiece exhalation port.
3. Install new Strap Assembly, properly position new Strap Assembly valve cover over facepiece exhalation port and strap into place by firmly pressing together.
4. Engage holes in upper legs of valve cover assembly with facepiece buttons.
5. Perform a Positive and/or a Negative Pressure Seal Check prior to putting the respirator back in service to ensure the Strap Assembly is functioning properly.
6. **If you cannot achieve a proper fit, DO NOT enter a contaminated area. See your supervisor.**

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.

Arrangements for repairs will be made by the Program Administrator.

The following checklist will be used when inspecting respirators:

1. Facepiece:
 - cracks, tears, or holes
 - facemask distortion
 - cracked or loose lenses/faceshield

2. Headstraps:
 - breaks or tears
 - broken buckles

3. Valves:
 - residue or dirt
 - cracks or tears in valve material

4. Filters/Cartridges:
 - approval designation
 - gaskets
 - cracks or dents in housing
 - proper cartridge for hazard

5. Air Supply Systems (**Not currently used by Quabbin, Inc.**)

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 washing 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 if they detect any other damage to the respirator or its components.

Change Schedules

Based on discussions with our respirator supplier, employees wearing respirators with cartridges shall change the cartridges on their respirators per the following to ensure the continued effectiveness of the respirators. The useful life of particulate filters will vary with the concentration and nature of the particles being retained, and the activity of the respirator wearer.

1. When “N” series filters are used in a dirty environment, they must be changed after one work shift of use.
2. When “R” series filters are used in an environment in which oil is present, they must be changed after one work shift of use.
3. “P” filters should be changed when they become dirty, damaged or breathing becomes difficult.

Note: Filters must be immediately changed when an increase in breathing resistance is noticed.

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 work area. Each employee will have his/her name on the bag and respirator and the bag will only be used to store that employee’s respirator.

Defective Respirators

Respirators that are defective or have defective parts shall be taken out of service immediately. If, during an inspection, an employee discovers a defect in a respirator, he/she is to bring the defect to the attention of his or her supervisor. Supervisors will give all defective respirators to the Program Administrator. The Program Administrator will decide whether to:

1. Temporarily take the respirator out of service until it can be repaired.
2. Perform a simple fix on the spot, such as replacing a head strap.
3. Dispose of the respirator due to an irreparable problem or defect.

When a respirator is taken out of service for an extended period of time, the respirator will be tagged “out of service”, and the employee will be given a replacement of similar make, model, and size. All tagged out respirators will be kept in the Office Supply Storage Area.

11. Training

The Program Administrator will provide training to respirator users and their supervisors on the contents of the Quabbin 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 that must wear respirators.

The training course will cover the following topics:

1. The Quabbin Respiratory Protection Program.
2. The OSHA Respiratory Protection standard.
3. The respiratory hazards encountered at Quabbin, Inc. and their health effects.
4. The proper selection and use of respirators.
5. The limitations of respirators.
6. The respirator donning and user seal (fit) checks.
7. Fit testing.
8. Emergency use procedures.
9. Cleaning, maintenance, change schedules and storage.
10. Medical signs and symptoms limiting the effective use of respirators.

Employees will be retrained annually or as needed (e.g., if they change departments and need to use a different respirator). Employees must demonstrate their understanding of the topics covered in the training through hands-on exercises and a written test. Respirator training will be documented by the Program Administrator and the documentation will include the type, model, and size of respirator for which each employee has been trained and fit tested.

12. Program Evaluation

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 Quabbin's management, and the report will list plans to correct deficiencies in the respirator program and target dates for the implementation of those corrections.

13. Documentation and Recordkeeping

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

Also maintained kept in the Program Administrator's office with the Personnel Folders 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 PLHCP documented findings are confidential and will remain at **Orange Pulmonary and Internal Medicine**. The company will only retain the PLHCP's written recommendation regarding each employee's ability to wear a respirator.

14. Voluntary Respirator Use

Voluntary use of respirators is allowed with the approval of the Program Administrator for employees worried about nuisance level dust. Employees should fill out a "Request for Voluntary Use of a Respirator" form and submit it to the Program Administrator. The only respirator allowed to be used by employees not currently in Quabbin's Respirator Program is the Filtering Facepiece N95 Dust Mask.

If filtering facepieces (dust masks) are voluntarily worn, the Program Administrator will provide these employees with the information contained in Appendix D of the standard. (Appendix D details the requirements for voluntary use of respirators by employees.)

Employees choosing to wear a half facepiece APR in addition to being provided with Appendix D must comply with the procedures for Medical Evaluation, Respirator Use, Cleaning, Maintenance and Storage along with all of the requirements of Quabbin's Respirator Program. The Program Administrator will only allow voluntary respirator use after it has been determined that the respirator itself will not create a hazard.

15. APPENDIX A

ACRONYMS

APR - Air Purifying Respirator

IDLH - Immediately Dangerous to Life and Health

NIOSH - National Institute for Occupational Safety and Health

OSHA - Occupational Safety and Health Administration

PLHCP - Physician or Other Licensed Health Care Professional

ppm - Parts per Million

SAR - Supplied Air Respirator

SCBA - Self Contained Breathing Apparatus

17. **Acknowledgement of Training In The Use of Respirators**

I _____, hereby acknowledge by my signature below, that on _____ I received training required by OSHA standard 29CFR 1910.134 in the proper use of a respirator. I agree that I will not grow any facial hair that prevents the respirator from obtaining a good face seal.

I was given information on the correct use of the respirator, proper fit testing, cleaning and storage of the respirator. I have been given the FT30 Fit Test and agree that I did not get any bitter taste while being tested.

Employee Signature: _____

Signature of Instructor: _____

Respirator:

Make: 3M Half-Face Piece Respirator

Model: 7000 Series

NIOSH Number: P100 Filter

Style: ½ Face Piece

Size: _____

18. Request for Voluntary Use of a Dust Mask

Employee Name: _____ Date of Request: _____

Department: _____

Job Description: _____

Respiratory Hazard: _____

Reason for Requesting Use of a Respirator: _____

Appendix D to Sec. 1910.134 (Mandatory)

Information for Employees Using Respirators When Not Required Under the Standard

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 workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers 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 employer 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:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
2. 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.
3. 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.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

Respirator:

Make: 3M

Model: 8500 Series

NIOSH Number: N95

Style: Dust Mask

Size: _____

The information above has been reviewed with me and I agree that I will use the respirator specified as required by Quabbin's Respirator Program.

Employee Signature: _____

Request for Voluntary Use of a Respirator as described above is: **Approved** **Disapproved**

Signature of Program Administrator: _____

**19. Appendix C to Sec. 1910.134: OSHA
Respirator Medical Evaluation Questionnaire (Mandatory)**

To the employer:

Answers to questions in Section 1, and to question 9 in Section 2 of Part A, do not require a medical examination.

To the employee:

Can you read (Circle one): **Yes / No**

Your employer must allow you to answer this questionnaire during normal working hours or at a time and place that is convenient to you. To maintain your confidentiality, your employer or supervisor must not look at or review your answers, and your employer must tell you how to deliver or send this questionnaire to the health care professional who will review it.

Medical Exam

Quabbin, Inc. has set up a Respiratory Medical Appointment for you. The appointment is during normal working hours and it is at no cost to you. Please show up at the below appointment on time and with this Respirator Medical Evaluation Questionnaire completely filled out.

Employee's Name: _____

Appointment Date and Time: _____

Orange Pulmonary and Internal Medicine
Dr. Mohsen Noreldin, M.D., M.P.H.
450 West River Street – Suite 5
Orange, MA 01364
Phone: 978-544-1505
Fax: 978-544-1554

The results of Quabbin’s current hazard evaluation are the following:

Quabbin’s Hazard Assessment – 14 January, 2013

<u>Department/Process</u>	<u>Contaminant</u>	<u>Exposure Level</u>	<u>Exposure Limit</u>	<u>Controls</u>
Throughout the Shop Cleaning Operations	Metal Dust Nuisance Level Dust	< 5 mg/Cu Meter	5 mg/Cu Meter	Filtering Facepiece N95 Dust Mask
Die Cutting Department Sawing Operations	Wood Dust Nuisance Level Dust	< 5 mg/Cu Meter	5 mg/Cu Meter	Filtering Facepiece N95 Dust Mask
Grinding Department Grinding Operations	Metal Dust Nuisance Level Dust	< 5 mg/Cu Meter	5 mg/Cu Meter	Filtering Facepiece N95 Dust Mask
Powder Coating Department Powder Coating Operations	Powder Dust Nuisance Level Dust	< 5 mg/Cu Meter	5 mg/Cu Meter	Filtering Facepiece N95 Dust Mask
Powder Coating Department Shot Blasting Operations	Metal Dust Nuisance Level Dust	< 5 mg/Cu Meter	5 mg/Cu Meter	Filtering Facepiece N95 Dust Mask
Powder Coating Department Shot Waste Disposal Operations	Metal Dust Nuisance Level Dust	< 5 mg/Cu Meter	5 mg/Cu Meter	Filtering Facepiece N95 Dust Mask

Part A. Section 1. (Mandatory)

The following information must be provided by every employee who has been selected to use any type of respirator. (Please print)

1. Today's date: _____

2. Your name: _____

3. Home address: _____

4. Work address: **Quabbin, Inc**
158 Governor Dukakis Drive
Orange, MA 01364

Tel: 978-544-3872

Fax: 978-544-3916

5. Your age (to nearest year): _____

6. Date of birth: _____

7. Sex (Circle one): **Male / Female**

8. Your height: _____ ft. _____ in.

9. Your weight: _____ lbs.

10. Your job title: _____

11. Work Environment while wearing a respirator:

a. Maximum working temperature: _____

b. Minimum working temperature: _____

c. Maximum humidity: _____

12. A phone number where you can be reached by the health care professional who reviews this questionnaire (include the area code): _____

13. The best time to phone you at this number: _____

14. Has your employer told you how to contact the health care professional who will review this questionnaire? (Circle one): **Yes / No**

15. Have you ever performed any of the following job processes at Quabbin, Inc.?

- a. Cleaning Operations with exposure to nuisance level metal dust: **Yes / No**
- b. Sawing Operations with exposure to nuisance level wood: **Yes / No**
- c. Grinding Operations with exposure to nuisance level metal dust: **Yes / No**
- d. Powder Coating Operations with exposure to nuisance level powder: **Yes / No**
- e. Shot Blasting Operations with exposure to nuisance level metal dust: **Yes / No**
- f. Shot Waste Disposal Operations with exposure to nuisance level metal dust: **Yes / No**

16 Check the type of respirator you will use (you can check more than one category):

- a. N, R, or P disposable respirator (filter-mask, non-cartridge type only).
- b. Other type (half-face piece type).

17 Have you worn a respirator previously (Circle one): **Yes / No**

If "yes," what type(s)? (Circle all that apply):

- 1. **Aearo P100 Series Filters for 8000 Series Bayonet Style**
- 2. **3M 6000 or 7000 Series Half Facepieces w/ P100 Filter**
- 3. **Moldex 2200 Dust and Mist Respirators**

- 4. _____
- 5. _____
- 6. _____
- 7. _____
- 8. _____
- 9. _____
- 10. _____

Part A. Section 2. (Mandatory)

Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator (Please circle "yes" or "no".)

1. Do you ***currently*** smoke tobacco, or have you smoked tobacco in the last month?

Yes / No

2. Have you ***ever had*** any of the following conditions?

a. Seizures (fits): **Yes / No**

b. Diabetes (sugar disease): **Yes / No**

c. Allergic reactions that interfere with your breathing: **Yes / No**

d. Claustrophobia (fear of closed-in places): **Yes / No**

e. Trouble smelling odors: **Yes / No**

3. Have you ***ever had*** any of the following pulmonary or lung problems?

a. Asbestosis: **Yes / No**

b. Asthma: **Yes / No**

c. Chronic bronchitis: **Yes / No**

d. Emphysema: **Yes / No**

e. Pneumonia: **Yes / No**

f. Tuberculosis: **Yes / No**

g. Ilicosis: **Yes / No**

h. Pneumothorax (collapsed lung): **Yes / No**

i. Lung cancer: **Yes / No**

j. Broken ribs: **Yes / No**

k. Any chest injuries or surgeries: **Yes / No**

l. Any other lung problem that you've been told about: **Yes / No**

4. Do you **currently** have any of the following symptoms of pulmonary or lung illness?
- a. Shortness of breath: **Yes / No**
 - b. Shortness of breath when walking fast on level ground or walking up a slight hill or incline: **Yes / No**
 - c. Shortness of breath when walking with other people at an ordinary pace on level ground: **Yes / No**
 - d. Have to stop for breath when walking at your own pace on level ground: **Yes / No**
 - e. Shortness of breath when washing or dressing yourself: **Yes / No**
 - f. Shortness of breath that interferes with your job: **Yes / No**
 - g. Coughing that produces phlegm (thick sputum): **Yes / No**
 - h. Coughing that wakes you early in the morning: **Yes / No**
 - i. Coughing that occurs mostly when you are lying down: **Yes / No**
 - j. Coughing up blood in the last month: **Yes / No**
 - k. Wheezing: **Yes / No**
 - l. Wheezing that interferes with your job: **Yes / No**
 - m. Chest pain when you breathe deeply: **Yes / No**
 - n. Any other symptoms that you think may be related to lung problems: **Yes / No**
5. Have you **ever had** any of the following cardiovascular or heart problems?
- a. Heart attack: **Yes / No**
 - b. Stroke: **Yes / No**
 - c. Angina: **Yes / No**
 - d. Heart failure: **Yes / No**
 - e. Swelling in your legs or feet (not caused by walking): **Yes / No**
 - f. Heart arrhythmia (heart beating irregularly): **Yes / No**
 - g. High blood pressure: **Yes / No**
 - h. Any other heart problem that you've been told about: **Yes / No**

6. Have you ***ever had*** any of the following cardiovascular or heart symptoms?

- a. Frequent pain or tightness in your chest: **Yes / No**
- b. Pain or tightness in your chest during physical activity: **Yes / No**
- c. Pain or tightness in your chest that interferes with your job: **Yes / No**
- d. In the past two years, have you noticed your heart skipping or missing a beat: **Yes / No**
- e. Heartburn or indigestion that is not related to eating: **Yes / No**
- f. Any other symptoms that you think may be related to heart or circulation problems: **Yes / No**

7. Do you ***currently*** take medication for any of the following problems?

- a. Breathing or lung problems: **Yes / No**
- b. Heart trouble: **Yes / No**
- c. Blood pressure: **Yes / No**
- d. Seizures (fits): **Yes / No**

8. If you've used a respirator, have you ***ever had*** any of the following problems?

(If you've never used a respirator, check the following box and go to question 9.)

- a. Eye irritation: **Yes / No**
- b. Skin allergies or rashes: **Yes / No**
- c. Anxiety: **Yes / No**
- d. General weakness or fatigue: **Yes / No**
- e. Any other problem that interferes with your use of a respirator: **Yes / No**

9. Would you like to talk to the health care professional that will review this questionnaire about your answers to this questionnaire? **Yes / No**

Questions 10 to 15 below must be answered by every employee who has been selected to use either a full-face piece respirator or a self-contained breathing apparatus (SCBA). **Quabbin, Inc. does not currently use a full-face piece respirator or a self-contained breathing apparatus (SCBA).** For employees who have been selected to use other types of respirators, answering these questions is voluntary.

10. Have you *ever lost* vision in either eye (temporarily or permanently)? **Yes / No**
11. Do you *currently* have any of the following vision problems?
- Wear contact lenses: **Yes / No**
 - Wear glasses: **Yes / No**
 - Color blind: **Yes / No**
 - Any other eye or vision problem: **Yes / No**
12. Have you *ever had* an injury to your ears, including a broken eardrum? **Yes / No**
13. Do you *currently* have any of the following hearing problems?
- Difficulty hearing: **Yes / No**
 - Wear a hearing aid: **Yes / No**
 - Any other hearing or ear problem: **Yes / No**
14. Have you *ever had* a back injury? **Yes / No**
15. Do you *currently* have any of the following musculoskeletal problems?
- Weakness in any of your arms, hands, legs, or feet: **Yes / No**
 - Back pain: **Yes / No**
 - Difficulty fully moving your arms and legs: **Yes / No**
 - Pain or stiffness when you lean forward or backward at the waist: **Yes / No**
 - Difficulty fully moving your head up or down: **Yes / No**
 - Difficulty fully moving your head side to side: **Yes / No**
 - Difficulty bending at your knees: **Yes / No**
 - Difficulty squatting to the ground: **Yes / No**
 - Climbing a flight of stairs or a ladder carrying more than 25 lbs: **Yes / No**
 - Any other muscle or skeletal problem that interferes with using a respirator: **Yes / No**

Part B

Any of the following questions, and other questions not listed, may be added to the questionnaire at the discretion of the health care professional who will review the questionnaire:

1. In your present job, are you working at high altitudes (over 5,000 feet) or in a place that has lower than normal amounts of oxygen? **Yes / No**

If "yes," do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you're working under these conditions? **Yes / No**

2. At work or at home, have you ever been exposed to hazardous solvents, hazardous airborne chemicals (e.g., gases, fumes, or dust), or have you come into skin contact with hazardous chemicals? **Yes / No**

If "yes," name the chemicals if you know them: _____

3. Have you ever worked with any of the materials, or under any of the conditions, listed below?

- a. Asbestos: **Yes / No**
- b. Silica (*e.g.*, in sandblasting): **Yes / No**
- c. Tungsten/cobalt (e.g., grinding or welding this material): **Yes / No**
- d. Beryllium: **Yes / No**
- e. Aluminum: **Yes / No**
- f. Coal (for example, mining): **Yes / No**
- g. Iron: **Yes / No**
- h. Tin: **Yes / No**
- i. Dusty environments: **Yes / No**
- j. Any other hazardous exposures: **Yes / No**

If "yes," describe these exposures: _____

4. List any second jobs or side businesses you have: _____

5. List your previous occupations: _____

6. List your current and previous hobbies: _____

7. Have you been in the military services? **Yes / No**

If "yes," were you exposed to biological or chemical agents (either in training or combat):
Yes / No

8. Have you ever worked on a HAZMAT team? **Yes / No**

9. Other than medications for breathing and lung problems, heart trouble, blood pressure, and seizures mentioned earlier in this questionnaire, are you taking any other medications for any reason (including over-the-counter medications)? **Yes / No**

If "yes," name the medications if you know them: _____

10. Will you be using any of the following items with your respirator(s)?

- a. HEPA Filters: **Yes / No**
- b. Canisters (for example, gas masks): **Yes / No**
- c. Cartridges: **Yes / No**

11. How often are you expected to use the respirator(s)? (Circle "yes" or "no" for all answers):

- a. Escape only (no rescue): **Yes / No**
- b. Emergency rescue only: **Yes / No**
- c. Less than 5 hours *per week*: **Yes / No**
- d. Less than 2 hours *per day*: **Yes / No**
- e. 2 to 4 hours per day: **Yes / No**
- f. Over 4 hours per day: **Yes / No**

12. During the period you are using the respirator(s), is your work effort:

a. Light (less than 200 kcal per hour): Yes / No

If "yes," how long does this period last during the average shift: _____ hrs. _____ mins.

Examples of a light work effort are *sitting* while writing, typing, drafting, or performing light assembly work; or *standing* while operating a drill press (1-3 lbs.) or controlling machines.

b. Moderate (200 to 350 kcal per hour): Yes / No

If "yes," how long does this period last during the average shift: _____ hrs. _____ mins.

Examples of moderate work effort are *sitting* while nailing or filing; *driving* a truck or bus in urban traffic; *standing* while drilling, nailing, performing assembly work, or transferring a moderate load (about 35 lbs.) at trunk level; *walking* on a level surface about 2 mph or down a 5-degree grade about 3 mph; or *pushing* a wheelbarrow with a heavy load (about 100 lbs.) on a level surface.

c. Heavy (above 350 kcal per hour): Yes / No

If "yes," how long does this period last during the average shift: _____ hrs. _____ mins.

Examples of heavy work are *lifting* a heavy load (about 50 lbs.) from the floor to your waist or shoulder; working on a loading dock; *shoveling; standing* while bricklaying or chipping castings; *walking* up an 8-degree grade about 2 mph; *climbing stairs* with a heavy load (about 50 lbs.).

13. Will you be wearing protective clothing and/or equipment (other than the respirator) when you're using your respirator? **Yes / No**

a. Eye Protection: **Yes / No**

b. Steel Toe Shoes: **Yes / No**

c. Hearing Protection: **Yes / No**

If "yes," describe any additional protective clothing and/or equipment: _____

14. Will you be working under hot conditions (temperature exceeding 77 deg. F)? **Yes / No**

15. Will you be working under humid conditions? **Yes / No**

16. Describe the work you'll be doing while you're using your respirator(s):

17. Describe any special or hazardous conditions you might encounter when you're using your respirator(s) (for example, confined spaces, life-threatening gases):

18. Provide the following information, if you know it, for each toxic substance that you'll be exposed to when you're using your respirator(s):

Name of the first toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of the second toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of the third toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

The name of any other toxic substances that you'll be exposed to while using your respirator:

19. Describe any special responsibilities you'll have while using your respirator(s) that may affect the safety and well-being of others (for example, rescue, security):
