

22. Respiratory Protection Program

Purpose

The primary objective of this program is to protect employees from inhalation and ingestion of harmful levels of air contaminants.

Policy

Employees shall not be exposed to air contaminants which exceed the limits detailed in OSHA Regulation CFR 1910.1000. When there is a probability of exposure to air contaminants exceeding these limits, proper respiratory protection shall be required.

Scope

This policy applies to all personnel in the performance of their jobs with XYZ CONSTRUCTION CORPORATION.

Procedures for Selecting Respiratory Protection

1. Determination of Need for Respiratory Protection

- a) The foreman of any operation involving the release, or possible release, of airborne contaminants such as dusts, gases, fumes, mists, etc. should contact the Job Superintendent or management for advice on precautions to be taken.
- b) The Job Superintendent shall evaluate the hazard and determine if exposure to contaminants can be eliminated by environmental or engineering controls. Example: Substitution of a less hazardous procedure or material, use of general and local ventilation, enclosing or isolating the operation(s), or employee rotation.
- c) When effective engineering controls have reduced exposures to the lowest possible level and the air quality still exceeds a PEL (Permissible Exposure Limit), the job superintendent will make a decision on the need for respirators based on Material Safety Data Sheets, industrial hygiene monitoring, medical experience, or other pertinent information.

2. Operations Requiring Respiratory Protection

- a) All employees performing jobs which are designated mandatory respirator jobs shall be informed of this requirement. This shall be done through:
 - Specifying the correct respirator in the Job Specifications report or other such written procedures for the Job and/or Project Safety meetings.
 - Postings at the worksite or signs in the area where the job exists.

3. Selection and Procurement of Respirators

- a) Respirators shall be selected according to the hazard(s) to which workers are exposed, keeping in mind the physical and chemical properties of the air contaminant(s) and concentration(s) likely to be encountered.
- b) Prior to donning a respirator, XYZ CONSTRUCTION CORPORATION employees are required to be medically evaluated and fit-tested. After successfully passing the medical examination and the fit-test, respirators will be provided by XYZ CONSTRUCTION CORPORATION and will be permanently assigned to employees that require their use routinely. Respirators for operations involving short-term use will be temporarily assigned to employees and returned to the facility upon completion of the task, where they will be cleaned and properly stored for future use. Replacement air purifying respirators will be issued when needed.
- c) The respirators utilized by XYZ CONSTRUCTION CORPORATION are NIOSH-certified Air Purifying Respirators which remove particulate or gaseous contaminants by passing ambient air through the air-purifying filter, cartridge, or canister. Air purifying respirators must not be used in atmospheres containing less than 19.5% oxygen by volume.
- d) In cases where air purifying respirators are not utilized due to the presence of a hazardous atmosphere, contaminant hazards have not been identified, or employee exposure and protection needed has not been identified or reasonably estimated, the atmosphere shall be considered to be IDLH (Immediately Dangerous to Life and Health). In these circumstances, a full facepiece pressure demand Self Containing Breathing Apparatus (SCBA) or a combination full facepiece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply will be utilized.

NOTE: Respiratory protection can be achieved through good work practices and the use of air purifying half-face or full-face respirators provided that respirator limitations are not exceeded. Use of a Self Containing Breathing Apparatus or a Supplied Air Respirator typically

does not apply to construction activities. In cases where the use of one of these respirators is required, the employee(s) who will be required to don the respirator will receive the necessary medical evaluation, fit-testing, and associated training prior to wearing the SCBA or SAR.

4. Respirator Approval

- a) Only National Institute for Occupational Safety and Health (NIOSH)- and Mine Safety and Health Administration (MSHA)-approved (tested and certified) respirators should be used. Respirators shall be used only for the substances for which they are designed.

5. Medical Approval

- a) Employees will not be assigned to tasks requiring use of respirators unless it has been determined that they are physically able to perform the work while wearing a respirator. Persons who will be assigned to the mandatory use of respirators will have their medical history reviewed by a Medical Department before starting employment. The medical status of those required to use respirators should be viewed periodically thereafter. Based on the overall health of the individual, a doctor shall determine if the employee is to be restricted from wearing respiratory protective equipment. If a restriction is applied, supervision is notified and this fact is indicated on the employee's medical records.
- b) Employees required to wear any respirator will be required to fill out a medical questionnaire (see Appendix C to this Chapter) that will be sent to the physician after it is completed. The physician will review the questionnaire and determine whether a medical evaluation is needed. The employee will then be given an opportunity to discuss the questionnaire and the examination results with the physician.
- c) Employees who voluntarily wear filtering facepieces (dust masks) and are not exposed to a PEL (Permissible Exposure Limit) will not be required to be medically evaluated. Employees who voluntarily wear any other type of respirator will be required to be medically evaluated.

6. Training

- a) Employees required to use a respirator shall be trained at least annually by the respiratory protection program administrator ([NAME]) for their respective office. Additional training will be provided when needed. This training must be documented and shall include:
 - Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effects of the

respirator. (A copy of how to perform a positive and negative pressure check will be given to the employee.)

- What the limitations and capabilities of the respirator and the air purifying filters, cartridges, and canisters are.
- How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions.
- How to inspect, put on and remove, use, and check the seals of the respirator.
- What the procedures are for maintenance and storage of the respirator. (A copy of respirator cleaning procedures will be given to the employee.)
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
- Procedures for proper use of respirators in routine and reasonably foreseeable emergency situations.
- Procedures to ensure adequate air quality.
- Instructions to employees who voluntarily use filtering facepieces (dust masks) when not required to. (A copy of information pertaining to respirator use when not required will be given to the employee.) (See Appendix D to this Chapter.)
- Instructions from respirator manufacturer.

Fit Testing

1. Qualitative Fit Test

- a) Prior to initial use of any tight-fitting respirator, each employee will be fit tested with the same make, model, style, and size of the respirator they will be using. Fit testing will be done annually or when changes in the employee's physical condition could affect respirator use. This is done to ensure that each employee is able to obtain a good facepiece-to-face seal. The fit test will be performed by the respiratory program administrator following protocol established under Appendix A. to 1910.134: Fit Testing Procedures. (See Appendix A to this Chapter.)

- b) Documentation of fit tests performed will be maintained at XYZ Construction Corporation's main office. The records will contain information in accordance with the record-keeping requirements set forth in 1910.134(m)

2. Positive and Negative Pressure Tests

- a) Respirator users shall be trained in how to perform positive and negative pressure tests and should use them each time the respirator is donned as a means of quickly checking respirator fit. (See Appendix B-1 to this Chapter.)
- b) Positive Pressure Test: This test is performed by closing off the respirator exhalation valve using the palm of the hand and exhaling gently into the facepiece. The fit is considered satisfactory if slight positive pressure can be built up inside the facepiece without any evidence of outward leakage.
- c) Negative Pressure Test: In this test, the user closes off the air inlet of the respirator by covering it so that it cannot pass air; inhales gently so that the facepiece collapses slightly; and holds breath for about 10 seconds. If the facepiece remains slightly collapsed and no inward leakage is detected, a suitable fit exists.

3. Inspecting, Cleaning, Storing, and Maintaining Respirators

- a) Employees must inspect their respirator each day it is used for proper function, including checking inhalation and exhalation valves, facepiece, and wear and condition of head straps. Rubber elastomer parts shall be inspected for pliability and signs of deterioration.
- b) Filter, cartridge, or canister life must not be exceeded. Gas and vapor cartridges must be equipped with an ESLI (end of service life indicator) certified by NIOSH. When this type of cartridge is not available, they must be replaced before the end of their service life. This will be determined by the superintendent on site.
- c) Respirators permanently assigned must be thoroughly cleaned with a sanitizing solution by the employee after each use. Respirators issued for temporary use will be cleaned when they are returned. Respirator cleaning procedures will follow the manufacturer's guidelines or the following protocol as per Appendix B-2 to 1910.134 will be utilized. (See Appendix B-2 to this Chapter.)
- d) Clean respirators should be stored either in a clean bag, a big coffee can, or in a clean storage cabinet. Respirators must be stored properly to prevent deformation of the facepiece and exhalation valve. To prevent

damage, respirators should not be stored in toolboxes unless they are in carrying cases or cartons. Also protect respirators from dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals.

- e) A selection of replacement parts, cartridges, and filters is available from your supervisor. Any repairs or replacement of parts must be done in accordance with the manufacturer's specifications and done by a trained person using NIOSH-approved parts designed for the respirator.
- f) When repairs are made on respirators, NIOSH-approved repair parts must be used which are designed for that specific respirator. Interchanging between different models will void the respirator's certification and may cause dangerous air leaks or equipment failure.

4. Program Evaluation

- a) Random inspections should be conducted regularly by the supervisor to ensure that respirators are properly selected, used, cleaned and maintained. Deficiencies will be noted and corrective measures taken. Failure to wear a respirator when required will result in disciplinary action as per XYZ Construction Corporation's Disciplinary Program.

Appendix A

Fit Testing Procedures

Fit Testing Procedures
(Mandatory)
Appendix A to § 1910.134

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 re-tested 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 re-tested.

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 which could interfere with respirator fit.

14. Test Exercises.

- (a) The following test exercises are to be performed for all fit testing methods prescribed in this appendix, except for the CNP method. A separate fit testing exercise regimen is contained in the CNP protocol. The test subject shall perform exercises, in the 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) Grimace. The test subject shall grimace by smiling or frowning. (This applies only to QNFT testing; it is not performed for QLFT)

(7) 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 shroud type QNFT or QLFT units that do not permit bending over at the waist.

(8) 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.

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 #14 and #15 combined, is adequate.

(2) The test enclosure shall have a ¾ 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 milligrams 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 in 4. (a) 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 (e.g., 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 different respirator shall be tried and the entire test procedure is repeated (taste threshold screening and fit testing).

Appendix B-1

User Seal Check Procedures

User Seal Check Procedures
(Mandatory)
Appendix B-1 to § 1910.134

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.

I. 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 replacing it after the test.

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.

II. 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.

Appendix B-2

Respirator Cleaning Procedures

Respirator Cleaning Procedures

Appendix B-2 to § 1910.134 (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

- A. 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.
- B. Wash components in warm (43° C [110° 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.
- C. Rinse components thoroughly in clean, warm (43° C [110° F] maximum), preferably running water. Drain.
- D. When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:
 1. Hypochlorite solution (50 ppm of chlorine) made by adding approximately one tablespoon of laundry bleach to one gallon of water at 43° C (110° F); or,
 2. 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° C (110° F); or,
 3. Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.
- E. Rinse components thoroughly in clean, warm (43° C [110° 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.
- F. Components should be hand-dried with a clean lint-free cloth or air-dried.
- G. Reassemble facepiece, replacing filters, cartridges, and canisters where necessary.
- H. Test the respirator to ensure that all components work properly.

Appendix C

OSHA Respirator Medical Evaluation Questionnaire

OSHA Respirator Medical Evaluation Questionnaire

(Mandatory)

Appendix C to § 1910.134

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.

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).

Company _____

1. Your name: _____
2. Today's date: _____
3. Your age (to nearest year): ____
4. Sex (circle one): Male/Female
5. Your height: ____ ft. ____ in.
6. Your weight: ____ lbs.
7. Your job title: _____
8. A phone number where you can be reached by the health care professional who reviews this questionnaire (include the Area Code): _____
9. The best time to phone you at this number: _____
10. Has your employer told you how to contact the health care professional who will review this questionnaire (circle one): _____ Yes/No
11. 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 (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus).
12. Have you worn a respirator (circle one): _____ Yes/No
If "yes," what type(s): _____

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. Silicosis: 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 space 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 who 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-facepiece 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?
 - a. Wear contact lenses: Yes/No
 - b. Wear glasses: Yes/No
 - c. Color blind: Yes/No
 - d. Any other eye or vision problem: Yes/No
- 12. Have you ever had an injury to your ears, including a broken ear drum: Yes/No
- 13. Do you currently have any of the following hearing problems?
 - a. Difficulty hearing: Yes/No
 - b. Wear a hearing aid: Yes/No
 - c. 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?
 - a. Weakness in any of your arms, hands, legs, or feet: Yes/No
 - b. Back pain: Yes/No
 - c. Difficulty fully moving your arms and legs: Yes/No
 - d. Pain or stiffness when you lean forward or backward at the waist: Yes/No
 - e. Difficulty fully moving your head up or down: Yes/No
 - f. Difficulty fully moving your head side to side: Yes/No
 - g. Difficulty bending at your knees: Yes/No
 - h. Difficulty squatting to the ground: Yes/No
 - i. Climbing a flight of stairs or a ladder carrying more than 25 lbs: Yes/No
 - j. 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 that apply to you)?:
- 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

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

14. Will you be working under hot conditions (temperature exceeding 77° 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): _____

Appendix D

*Information for Employees Using Respirators
When Not Required Under the Standard*

Information for Employees Using Respirators When Not Required Under the Standard

Appendix D to § 1910.134 (Non-Mandatory)

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.