



Loss Control TIPS

Technical Information Paper Series

Innovative Safety and Health SolutionsSM

Overview of OSHA's Respiratory Protection Standard

WARNING:

***Inappropriate use of respiratory protection devices
can result in injury or death.***

***Consult a trained safety professional for guidance on application of
respiratory protection in your particular occupational environment.***

What is Respiratory Protection?

Respiratory protection refers to efforts to protect employees' health by devices that either:

- remove contaminants from the air the employee breathes, or
- provide a safe supply of breathable air directly to the employee.

Respiratory protection devices should be used *only* after all practical engineering and administrative controls to reduce exposures have been attempted, or during the implementation of such controls. Respiratory protection should never be a permanent substitute for reducing exposure through engineering or administrative controls.

Regulation of Respiratory Protection

If respiratory protection is required in your workplace, you may be subject to compliance with:

- federal Occupational Safety and Health Administration (OSHA) standard for respiratory protection (29 CFR 1910.134), or
- similar standards under state occupational safety and health programs, or
- federal Mine Safety and Health Administration (MSHA).

The remainder of this document provides some guidance on applying the revised OSHA Respiratory Protection Standard to your operation. Consult a safety professional and/or your legal counsel to determine your exact compliance requirements.



Evaluate the Work Environment

Before you can select the appropriate type of respirator to use, determine the type of hazard against which you need to protect your employees. Knowledge of the materials and operations is essential, as is the information in Material Safety Data Sheets for the materials in use. Consider these questions:

- Is there any possibility that an oxygen-deficient atmosphere exists?
- Keeping in mind intermittent and irregular operations, what are the type(s) of chemical hazard(s) likely to be present? (e.g., acid mists, solvents, inert materials, metals, etc.)
- In what form are the materials likely to be? (e.g., vapor, mist, dust, gas, fume, smoke)
- For each of these substances, what is the “Immediately Dangerous to Life or Health” (IDLH) level, *and* the exposure limit? (You may need to consult an Industrial Hygienist to determine these values.)
- What is the highest exposure level likely to be encountered for each of these substances?

Permissible Exposure Limits (PELs) vs. Threshold Limit Values (TLVs)

You may be legally required to follow OSHA’s Permissible Exposure Limits (PELs) as the exposure limits. However, in many cases, OSHA’s PELs are insufficiently stringent to protect human health. Review the Threshold Limit Values (TLVs) established by the American Conference of Governmental Industrial Hygienists *as well as the* PEL, and adopt the *lower* of these values.

OSHA’s Revised Respiratory Protection Standard

On January 8, 1998, the Occupational Safety and Health Administration (OSHA) published a new rule for respiratory protection (29 CFR 1910.134 in the Code of Federal Regulations). This was the first major revision of the standard in more than 25 years. Virtually all aspects of respiratory protection are affected including technological changes in respiratory protection equipment and changes in protection philosophy.

Overview of OSHA’s Standard

OSHA’s revised standard applies to workplaces in general industry, construction, longshoring, shipyards, and marine terminals. (It also applies to railway workers, until such time as the Federal Railway Administration releases a separate rule.) OSHA did not propose, and does not include, agricultural workplaces in the final respiratory protection standard. (Respirator use in pesticide operations is covered under standards of the Environmental Protection Agency.) Occupational exposure to tuberculosis (TB) will be addressed separately in a new OSHA regulatory section 29 CFR 1910.1035; a proposed rule for this was published in October 1997. Until this TB ruling is final, the language of the old 29 CFR 1910.134 respirator standard has been renumbered 29 CFR 1910.139 and applies only to TB respirator use.

OSHA estimates that 5 million American workers in 1.3 million work establishments have at least some occasion to use respirators for protection against toxic exposures or hazardous atmospheres. Once an employer has determined that the use of respirators is necessary (because a PEL or TLV has been exceeded), the standard requires the employer to establish or maintain a written respiratory protection program to protect workers who wear respirators. Other provisions include requirements for program administration; work-specific procedures; respirator selection; employee training; fit testing; medical evaluation; respirator use; and respirator cleaning, maintenance, and repair.

For the first time, the OSHA regulation addresses atmospheres that are Immediately Dangerous to Life or Health (IDLH), including interior structural fire fighting. The standard also simplifies and updates previous respiratory protection requirements. This last point is significant, since requirements relating to respiratory protection appear in many substance-specific OSHA standards. Duplicate provisions will be removed from these other standards and reference made to 29 CFR 1910.134.

Refer to Table 1, Selected Comparisons of Old and New OSHA Respiratory Protection Standards 29 CFR 1910.134 (following text of article).

Written Program Required

OSHA's standard requires employers to implement and maintain a written respiratory protection program whenever respirators are used in the workplace. This applies whether the respirator use is required by OSHA, is required by the employer as a condition of employment, or is permitted by the employer at the request of the employee (where the employee uses a respirator voluntarily).

The provision for voluntary use of respirators is new. When employees use respirators voluntarily, the employer must ensure that the employee is medically able to use the respirator, and that the respirator is cleaned, stored and maintained so that its use does not present a health hazard to the user. The employer must also provide the respirator wearer with information about the hazards of respirator use. The program must be in writing, unless the respirator is a filtering facepiece such as a dust mask.

OSHA will add a revised table of assigned protection factors to the final rule later. OSHA indicates that these factors are numerical ratings given to different types of respirators to tell users how much protection each can provide.

New Rules

The revised standards are longer than the previous version and go into considerable detail.

- *Program administration* includes requirements for a written plan with site-specific procedures.
- *Selection of the appropriate NIOSH-certified respirator*, based on an evaluation of the respiratory hazards in the workplace and any factors that would affect the performance and reliability of the equipment.
- *Medical evaluation* by means of a confidential questionnaire, to determine the ability of each worker to wear the selected respirator, plus follow-up medical examinations, as indicated (see attached form).
- *Fit testing of employees* before they are required to use any respirator with a negative or positive pressure tight-fitting face piece. The fit test may be quantitative (QNFT) or qualitative (QLFT), and is to be administered according to mandatory Appendix A.
- *Training* is to cover the reasons for respirator use; the importance of proper fit, use, maintenance, and storage; how to put on, remove, and check seals; and how to use the respirator in emergency situations, including what to do if it malfunctions. Training is to be repeated at least annually, and under various specified conditions.
- *Periodic evaluation* of the program to ensure that it continues to be effective.
- *Definitions* for key terms used in the standard

The standard also:

- Expands the definition of IDLH to include all atmospheres that pose an immediate threat to life, that would cause irreversible adverse health effects, or that would impair an individual's ability to escape.
- Codifies respirator selection criteria and links respirator selection directly to IDLH.
- Disallows the use of sensory warning properties of an air contaminant, such as the chemical's odor threshold, as the sole criterion for determining whether air-purifying respirators are adequate to protect employees.
- Expands the categories of people allowed to perform medical evaluations to include "other licensed health care professionals."
- Drops the prohibition on contact lens use.
- Allows the re-use of disposable respirators for more than one workshift, so long as they function properly.
- Updates breathing air quality requirements to current recognized standards.
- Drops the temperature alarm and air receiver requirements for compressors because of the new IDLH respirator requirements.
- Exempts newly hired workers from initial training if the worker had received training within the last 12 months and can demonstrate that he or she can use a respirator safely.
- Addresses the use of respirators in IDLH atmospheres, including firefighting. For interior structural firefighting, self-contained breathing apparatus is required, and at least two firefighters must enter together and remain in constant visual and voice contact with each other, while two additional firefighters must be on standby outside the building. This requirement is applicable to state and local government firefighters in the states that operate their own OSHA-approved plans, by adopting an identical or equally effective standard.

For more information, contact your local Hartford agent or your Hartford Loss Control Consultant. Visit The Hartford's Loss Control web site at <http://www.thehartford.com/corporate/losscontrol/>

This document is provided for information purposes only. It is not intended to be a substitute for individual legal counsel or advice on issues discussed within. Readers seeking resolution of specific legal issues or business concerns related to the captioned topic should consult their attorneys and/or insurance representatives.

Table 1. Selected Comparisons of Old and New OSHA Respiratory Protection Standards 29 CFR 1910.134

New 29 CFR 1910.134 Paragraph	New Version	Old Version
(a) Permissible practice	<ul style="list-style-type: none"> Employee mandate removed. Otherwise, no substantive changes from old version. 	---
(b) Definitions	<ul style="list-style-type: none"> New addition to the standard. 	<ul style="list-style-type: none"> Not present.
(c) Respiratory protection program	<ul style="list-style-type: none"> Addresses respiratory program when respirators are not required. Several clarifications 	<ul style="list-style-type: none"> Issue not addressed.
(d) Selection of respirators	<ul style="list-style-type: none"> Altitude correction for oxygen deficiency. Changing of gas/vapor filters based on ESLI^a or proven change schedule only. 	<ul style="list-style-type: none"> Issue not addressed. General reference to ANSI Z88.2-1969 for respirator selection. Acceptable to use odor detection if adequate warning properties.
(e) Medical evaluation	<ul style="list-style-type: none"> Responsible person is a physician or licensed health care professional (PLHCP^b). PLHCP is provided mandatory information on job and respirator. PAPR^c must be offered if medical indicated. Mandatory medical questionnaire (or direct interview). Medical examination done, as determined by PLHCP or by positive answers to specific questionnaire items. Laboratory tests determined by PLHCP. Periodic reevaluation not required, except as determined by PLHCP, patient symptoms, or work or program changes. 	<ul style="list-style-type: none"> Local physician is the responsible person. No such mandatory information. No such option. Local physician determines process. Local physician determines process. Local physician determines laboratory tests. Medical status should be reviewed periodically (for instance, annually).
(f) Fit testing [See also paragraph (o) below for fit-test and fit-check protocols.]	<ul style="list-style-type: none"> New paragraph. Fit tests are to be done annually. Qualitative fit test allowed only if required fit factor is 100 or less. All tight-fitting respirators (but not loose-fitting ones) to be fit tested. 	<ul style="list-style-type: none"> Material in <i>Use of respirators</i> paragraph. Not stated. Not stated. Not stated.

(table continued on next page)



Table 1. Selected Comparisons of Old and New OSHA Respiratory Protection Standards 29 CFR 1910.134, page 2

New 29 CFR 1910.134 Paragraph	New Version	Old Version
(g) Use of respirators	<ul style="list-style-type: none"> • No contact lens restriction. • Prohibition of facial hair or other interference with seal is only stipulated for tight-fitting respirators. • Fire fighters must use a “two in, two out” practice in fighting internal structure fires. 	<ul style="list-style-type: none"> • Contact lens restriction. • Not entirely clear. “Respirators shall not be worn when conditions prevent a good face seal...” • Issue not addressed.
(h) Maintenance and care of respirators	<ul style="list-style-type: none"> • Clean and disinfect respirator after each use if used by more than one employee. • Air and oxygen cylinders must be recharged when the pressure falls to 90% of the recommended pressure level. • Several other similar, more detailed guidance in proper respirator care. 	<ul style="list-style-type: none"> • “...cleaned, and disinfected as frequently as necessary....” • No such specific statement. • Information limited and scattered in several paragraphs.
(i) Breathing air quality and use	<ul style="list-style-type: none"> • Presents specifics of air quality. 	<ul style="list-style-type: none"> • No specifics noted.
(j) Identification of filters, cartridges, and canisters	<ul style="list-style-type: none"> • Removes burden of requiring proper labeling from employer; deletion of color identification table. 	<ul style="list-style-type: none"> • As with new rule, requires NIOSH approval label and color coding label to be present and legible.
(k) Training and information	<ul style="list-style-type: none"> • New paragraph. • Requires training annually, and as needed. • Clear list of specific topics employees need to understand and be able to demonstrate knowledge thereof. 	<ul style="list-style-type: none"> • Material scattered in other locations. • Periodicity of required training not stated. • More general guidelines.
(l) Program evaluation	<ul style="list-style-type: none"> • New paragraph. Requires workplace evaluation “as necessary” to ensure effective program. • Required regular consultation with employees regarding respirator issues. 	<ul style="list-style-type: none"> • “Frequent random inspections shall be conducted by a qualified individual to assure that respirators are properly selected, used, cleaned, and maintained.” • No such statement.
(m) Recordkeeping	<ul style="list-style-type: none"> • New paragraph. Clear itemization of required information. • Medical information covered by OSHA’s medical and exposure records access standard (29 CFR 1910.1020). 	<ul style="list-style-type: none"> • Requirements either not noted, or included in other paragraphs. • Issue not specifically addressed.

(table continued on next page)



Table 1. Selected Comparisons of Old and New OSHA Respiratory Protection Standards 29 CFR 1910.134, page 2

New 29 CFR 1910.134 Paragraph	New Version	Old Version
(n) Dates	<ul style="list-style-type: none"> • New paragraph. • Effective date is stated as April 8, 1998. Compliance date for most provisions is no later than October 5, 1998. • Program efforts in the past 12 months that meet the requirements of this section will be accepted. 	---
(o) Appendices	<ul style="list-style-type: none"> • New paragraph. Clearly presents all currently accepted qualitative and quantitative fit test methodologies. • Includes detailed instructions on how to do the fit tests. • Includes a mandatory medical questionnaire. • Gives a process whereby new fit protocols can be approved by OSHA. • Includes mandatory procedures for fit checks and respirator cleaning. • Includes nonmandatory information for nonrequired respirator use. 	<ul style="list-style-type: none"> • Not present. • Not included. • Not included. • No such mechanism. • General instructions noted in text of rule. • Issue not addressed.
<p>^aESLI = end-of-service-life indicator ^bPLHCP = physician or other licensed health care professional ^cPAPR = powered air-purifying respirator</p>		

Source: Hodous, Thomas K. "The New OSHA Respiratory Protection Standard." *OEM Report*, vol. 12, no. 4, April 1998, pp. 33-41.



OSHA Respiratory Protection Standard

29 CFR 1910.134 Appendix B-1

User Seal Check Procedures (Mandatory)

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.

OSHA Respiratory Protection Standard

29 CFR 1910.134 Appendix B-2

Respirator Cleaning Procedures (Mandatory)

These procedures are provided for employee 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 , 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:
 - Hypochlorite solution (50 ppm of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of water at 43°C. (110°F.) ; or,
 - Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliter s 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,
 - 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.

**OSHA Respiratory Protection Standard
29 CFR 1910.134 Appendix C
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.**

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. 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): _____

OSHA Respiratory Protection Standard 29 CFR 1910.134 Appendix D Information for Employees Using Respirators When Not Required Under the Standard (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.