



Safety & Health Consultation Program

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MODEL RESPIRATORY PROTECTION PROGRAM

This document is intended to aid industrial establishments in the development and implementation of a written respiratory protection program in compliance with the OSHA Respiratory Protection Standard, 29 CFR 1910.134. This model program must be modified to address the specific procedures and respirators used at a this facility. The program must be administered by a suitably trained program administrator. After the respiratory protection program has been written, it must be implemented, maintained, and enforced; it must not exist merely on paper.

(e) The use of the following respirators is OPTIONAL, and they may be used at the discretion of the designated employees:

Area - Employees	Respirator Type	Air Contaminant

(f) The following respirators are for EMERGENCY USE only and are not intended for routine use under normal conditions:

Area - Employees	Respirator Type	Air Contaminant or Emergency Condition

3. MAINTENANCE OF RESPIRATORS

- a) Respirators shall be cleaned, maintained, and stored based upon the manufacturer's guidance for the respirator.
- b) Chemical cartridges for an air-purifying respirator shall be changed according to a schedule which is based upon:
 - i) The end-of-service-life indicator (ESLI) for the cartridge, which is certified by NIOSH for the contaminant, if an ESLI is available; or

- ii) A change schedule for canisters and cartridges that is based on objective information or data that will ensure that they are changed before the end of their service life. The Program Administrator shall describe in the respirator program the information upon which the changeout schedule is based.
- c) If the respirator will be used for emergency response, then documentation of inspection shall be kept, including the date the inspection was performed, the name (or signature) of the person who made the inspection, the findings, required remedial action, and a serial number or other means of identifying the inspected respirator.
- d) In addition to the general storage requirements detailed in the manufacturer's instructions, the following locations are to be used for storage:

Area - Employees	Type of Respirator	Storage Location

4. USE OF RESPIRATORS UNDER CONDITIONS IMMEDIATELY DANGEROUS TO LIFE AND HEALTH (IDLH)

- (a) When an entry is made, at least one employee shall be located outside the IDLH atmosphere;
- (b) Visual, voice, or signal line communication shall be maintained between the employee(s) in the IDLH atmosphere and the employee(s) located outside the IDLH atmosphere;
- (c) The employee(s) located outside the IDLH atmosphere shall be trained and equipped to provide effective emergency rescue;
- (d) Before the employee(s) located outside the IDLH atmosphere enter(s) the IDLH atmosphere to provide emergency rescue, appropriate supervisory personnel shall be notified;
- (e) Employee(s) located outside the IDLH atmospheres shall be equipped with:

- i. Pressure demand or other positive pressure SCBAs, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA; and either
- ii. Appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the overall risk resulting from entry, or equivalent means for rescue where retrieval equipment is not feasible.

5. TRAINING

- (a) Prior to wearing a respirator, employees shall be trained so they understand and can demonstrate competence in at least the following areas:
 - i. The proper fit, usage, or maintenance of the respirator;
 - ii. What the limitations and capabilities of the respirator are;
 - iii. How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions;
 - iv. How to inspect, put on and remove, use, and check the seals of the respirator;
 - v. The general elements of this respirator program
- (b) Retraining shall be conducted at least annually, or more often, when needed to assure safe use of the respirators.
- (c) All training shall be documented.

6. MEDICAL EVALUATION

- (a) Employees who are required to wear respirators, or who choose voluntarily to wear a respirator, must pass a medical examination before being permitted to wear a respirator on the job. *The requirement for medical evaluation does not apply to employees who voluntarily use only disposable filtering facepiece respirators (dusts masks) and who are not overexposed to hazardous air contaminants.*
- (b) _____ shall provide medical evaluations for respirator use. The evaluation of the medical provider shall be given to the company in writing, and will be retained by the company.
- (c) The medical evaluation shall be conducted using either the appendix to this program titled “Medical Questionnaire For Respirator Use”, or by an equivalent examination by the medical provider which obtains the information requested by the questionnaire in Sections 1 and 2, Part A. (This questionnaire is designated “Appendix C” of OSHA’s respirator standard.)

- (d) Follow-up medical exams shall be conducted when:
 - i. An employee gives a positive response to any question among questions 1 through 8 in Section 2, Part A
 - ii. An employee reports signs and/or symptoms related to their ability to use a respirator, such as shortness of breath, dizziness, chest pains, or wheezing;
 - iii. The medical provider informs the Program Administrator that the employee needs to be reevaluated;
 - iv. Information from this program, including observations made during fit testing and program evaluation, indicates a need for reevaluation;
 - v. A change occurs in workplace conditions that may result in an increased physiological burden on the employee.

- (e) The specific findings of the evaluation are part of the medical record for each employee and will be kept confidential.

- (f) The following information shall be provided to the medical provider before a recommendation concerning an employee's ability to use a respirator is made:
 - i. The type and weight of the respirator to be used by the employee;
 - ii. The duration and frequency of respirator use (including use for rescue and escape);
 - iii. The expected physical work effort;
 - iv. Additional protective clothing and equipment to be worn; and
 - v. Temperature and humidity extremes that may be encountered.

7. FIT TESTING

- (a) Workers who are required to wear a negative pressure respirator will be fit-tested with each type of negative pressure respirator they are assigned to wear.

- (b) Fit-testing will be quantitative or qualitative.
 - i. In qualitative fit-testing the respirator wearer enters a test chamber filled with a challenge agent such as irritant smoke, isoamyl acetate, or saccharin. The wearer must go through a series of movements and indicate whether the challenge agent is sensed inside the respirator. If the wearer does not sense the challenge agent, the respirator "fits" adequately, and a pre-determined minimum protection factor is assigned. If the wearer indicates that the challenge agent is not sensed, then the respirator does not "fit", and the wearer should be fit-test with a different make or style of respirator.

 - ii. In quantitative fit-testing the respirator wearer enters a test chamber filled with a test substance such as oil or sodium chloride mist, or the ambient particulate matter is used as a test substance. The respirator

wearer must go through a series of movements, and the concentration inside and outside the respirator is measured by an appropriate analytical technique. If the lowest of the calculated fit-factors for three trials is greater than the pre-determined minimum fit-factor, the minimum fit-factor is assigned. If it is less than the minimum fit-factor the wearer should be fit-tested with a different make or style of respirator.

- (c) All fit-tests will be documented and become a part of the medical record for the employee. Employees shall have access to these records, pursuant to the requirements of 29 CFR 1910.1020.

Employee Name	Date of Fit Test	Fit Test Method Used	Respirator	Result

8. BREATHING AIR QUALITY AND USE

- a) Compressed breathing air shall meet the requirements for Type 1-Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989.
- b) Compressed oxygen shall not be used in atmosphere-supplying respirators that have previously used compressed air.
- c) Cylinders used to supply breathing air to shall be tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR part 173 and part 178).
- d) Compressors used to supply breathing air to respirators shall have suitable in-line air-purifying sorbent beds and filters to ensure breathing air quality. Sorbent beds and filters shall be maintained and replaced or refurbished periodically following the manufacturer's instructions. Sorbent beds and filters shall have a tag containing the most recent change date and the signature of the person authorized by the employer to perform the change. The tag shall be maintained at the compressor where it is readily visible to the employee using the supplied breathing air.

- e) Breathing air supplied from oil-lubricated compressors shall have an in-line carbon monoxide alarm to prevent carbon monoxide in the breathing air from exceeding 10 ppm.
- f) The employer shall ensure that breathing air couplings are incompatible with outlets for non-respirable worksite air or other gas systems.

9. OPTIONAL OR VOLUNTARY USE OF RESPIRATORS

- a) Employees who voluntarily use only disposable filtering facepiece respirators (dusts masks) and who are not overexposed to hazardous air contaminants will receive the information contained in Appendix B to this program titled “Voluntary Use of Respirators”
- b) Employees who voluntarily wear respirators other than disposable dust masks, will be included in the following provision of the respiratory protection program:
 - i. Medically evaluation;
 - ii. Training to clean, store, and maintain the respirator so that its use does not present a health hazard;
 - iii. Training on Appendix B to this program titled “Voluntary Use of Respirators”.

10. REVIEW OF THE RESPIRATORY PROTECTION PROGRAM

- a) The Program Administrator will conduct an annual evaluation of the workplace to ensure that the provisions of this program are being implemented. The evaluation will include consultation with employees who use respirators and their supervisors, site inspections, air monitoring and a review of records.
- b) Problems identified will be noted be reported to the plant or general manager, and the report will list plans to correct deficiencies in the respirator program and target dates for the implementation of those corrections.

Appendix A

Medical Questionnaire For Respirator Use

(Corresponds to OSHA Respirator Standard 29 CFR 1910.134, Appendix C)

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 (except when you had a cold):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. Has your wearing a respirator caused 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 that occurs only when you use the respirator:Yes No
- d. Unusual 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. Difficulty 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 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):

Appendix B

Voluntary Use of Respirators

(Corresponds to OSHA Respirator Standard 29 CFR 1910.134 Appendix D)

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.