

## **Respiratory Protection Program**

### **I. Purpose:**

This respiratory protection program lays out standard operating procedures to ensure the protection of all Campus Facilities employees from respiratory hazards through proper selection and use of respirators. Respirators are to be used only where engineering control of respirator hazards is not feasible, or while engineering controls are being installed.

Asbestos abatement activities are exempt from this policy because they are covered by The University of Missouri-Columbia E H & S Department in a separate policy.

### **II. RESPONSIBILITIES**

#### **1. Management**

It is management's responsibility to determine what specific jobs or tasks may require the use of respiratory protective equipment. Management must also provide proper respiratory protective equipment to meet the needs of each specific application. Employees must be provided with adequate training and instructions on all equipment.

#### **2. Supervisors**

Supervisors of each area are responsible for ensuring that all personnel under their control are completely knowledgeable of the respiratory protection requirements for the areas in which they work. They are also responsible for ensuring that their subordinates comply with all facets of this respiratory protection program, including respirator inspection and maintenance. They are responsible for coaching, counseling, scheduling retraining if necessary and implementing disciplinary procedures for employees who do not comply with respiratory protection requirements.

#### **3. Employees**

It is the responsibility of the employees to have an awareness of the respiratory protection requirements for their work areas (as explained by management). Employees are also responsible for wearing the appropriate respiratory protective equipment according to proper instructions and for maintaining the equipment in a clean and operable condition.

#### 4. Program Administrator

It is the responsibility of the Program Administrator to evaluate hazards, select appropriate respirators, facilitate training for respiratory protection and modify this policy to remain in compliance with OSHA standards and guidelines. The Program Administrator for Campus Facilities is the Safety Training and Development Coordinator.

### III. Definitions

1. **Air purifying respirator** means a respirator with an air purifying filter, cartridge or canister that removes specific air contaminants by passing ambient air through the air purifying element.
2. **Atmosphere supplying respirator** means a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere and includes supplied air respirators (SARS).
3. **Canister or cartridge** means a container with a filter, sorbent, or catalyst or combination of these items, which removes specific contaminants from the air passed through the container.
4. **Emergency situation** means any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment that may or does result in an uncontrolled significant release of an airborne contaminant.
5. **Employee exposure** means exposure to a concentration of an airborne contaminant that would occur if the employee were not using respiratory protection.
6. **Filter or air purifying element** means a component used in respirators to remove solid or liquid aerosols from the inspired air.
7. **Filtering face piece** (dust mask) means a negative pressure particulate respirator with a filter as an integral part of the face piece or with the entire face piece composed of the filtering medium.
8. **Fit factor** means a quantitative estimate of the fit of a particular respirator to a specific individual and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.
9. **Fit test** means the use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.
10. **High efficiency particulate air filter (HEPA)** means a filter that is at least 99.97% efficient in removing monodisperse particles of 0.3 micrometers in diameter. Equivalent NIOSH particulate filters are N100, R100 and P100.
11. **Immediately dangerous to life or health (IDLH)** means an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects or would impair an individual's ability to escape from a dangerous atmosphere. Campus Facilities does not work in IDLH environments.
12. **Negative pressure respirator (tight fitting)** means a respirator in which the air pressure inside the face piece is negative during inhalation with

- respect to the ambient air pressure outside the respirator.
13. **Oxygen deficient atmosphere** means an atmosphere with an oxygen content below 19.5% by volume.
  14. **Physician or other licensed health care professional (PLHCP)** means an individual whose legally permitted scope of practice (i.e., license, registration or certification) allows him or her to independently provide or be delegated the responsibility to provide some or all of the health care services required by this standard.
  15. **Positive pressure respirator** means a respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.
  16. **Pressure demand respirator** means a positive pressure atmosphere-supplying respirator that admits breathing air to the face piece when the positive pressure is reduced inside the face piece by inhalation.
  17. **Qualitative fit test (QLFT)** means a pass/fail fit test to assess the adequacy of respirator fit that relied on the individual's response to the test agent.
  18. **Quantitative fit test (QNFT)** means an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.
  19. **Tight fitting face piece** means a respiratory inlet covering that forms a complete seal with the face.
  20. **User seal check** means an action conducted by the respirator user to determine if the respirator is properly seated to the face.

#### IV. Work Area Evaluation

Work area evaluations will be performed on a periodic basis to provide for a continuing healthful environment for employees and to aid in proper respiratory protection selection. In order to determine the potential exposure level regarding use of hazardous materials; a work area evaluation based on similar processes, the Material Safety Data Sheet (MSDS), professional judgment of the CF Safety Training and Development Coordinator and Supervision and air monitoring may be used. Results of these evaluations will determine the need for respiratory protection. Periodically thereafter as required by substance specific standards or every twelve months, a review of the work area evaluation will be made to determine if respiratory protection continues to be required. Records of all work area evaluations will be on file at the CF Safety office for access by employees. The CF Job Hazard Analysis using the MSDS and any air monitoring assessments will be our records.

## **V. Respirator Selection**

Respirators are selected on the basis of respiratory hazards to which the worker is exposed and workplace and user factors that affect respirator performance and reliability. All selections must be approved by the Program Administrator using the OSHA guidelines.

Outside consultation, manufacturer's assistance, and other recognized authorities will be consulted if there is any doubt regarding proper selection.

### **1. Respirator Types and Uses**

The following types of respirators are in use in this facility:

Types:

For identified required use: Half mask and full face air purifying, Supplied air, Powered air purifying respirator (PAPR),  
Comfort voluntary use: Filtering face piece (Paper disposable type)

Examples of use:

Asbestos (see E H & S Policy), Abrasive blasting, Painting, Dust, Use of solvents, thinners, degreasers, Pesticides, herbicides

Only NIOSH-certified respirators are selected and used. Where practicable, the respirators will be assigned to individual workers for their exclusive use.

### **2. When approving any respirator in general:**

- A. Select and provide respirators based on respiratory hazard(s) to which a worker is exposed as well as workplace and user factors that affect respirator performance and reliability.
- B. Select a NIOSH-certified respirator. (NIOSH stands for the National Institute for Occupational Safety and Health)
- C. Identify and evaluate the respiratory hazard(s) in the workplace, including a reasonable estimate of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form. Consider the atmosphere to be immediately dangerous to life or health (IDLH) if a reasonable estimate of employee exposure cannot be identified.
- D. Select respirators from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

### **3. When selecting respirators for atmospheres that are not IDLH:**

- A. Provide a respirator that is adequate to protect the health of the employee and ensure compliance with all other OSHA statutory and regulatory requirements, under routine and reasonably foreseeable emergency situations.
- B. Select respirators appropriate for the chemical state and physical form of the contaminant.
- C. For protection against gases and vapors, provide:
  - 1. An atmosphere-supplying respirator, or
  - 2. An air-purifying respirator, provided that: (1) The respirator is equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant; or (2) If there is no ESLI appropriate for conditions in our workplace, implement a change schedule for canisters and cartridges that is based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life. Describe in the respirator program the information and data relied upon and the basis for the canister and cartridge change schedule and the basis for reliance on the data.
- D. For protection against particulates, provide:
  - 1. An atmosphere-supplying respirator; or
  - 2. An air-purifying respirator equipped with a filter certified by NIOSH under 30 CFR part 11 as a high efficiency particulate air (HEPA) filter, or an air-purifying respirator equipped with a filter certified for particulates by NIOSH under 42 CFR 84; or
  - 3. For contaminants consisting primarily of particles with mass median aerodynamic diameters (MMAD) of at least 2 micrometers, an air-purifying respirator equipped with any filter certified for particulates by NIOSH.

## **VI. Medical Evaluations**

### **1. Initial Examination**

At the University of Missouri – Columbia, Campus Facilities, persons will not be assigned to tasks requiring use of respirators nor fit tested unless it has been determined that they are physically able to perform the work and use the respirator.

The Occupational Medicine Program, Division of Pulmonary and Critical Care in the School of Medicine will perform medical evaluations using a medical questionnaire found in Sections 1 and 2, Part A of Appendix C of 29 CFR 1910.134.

All medical questionnaires and examinations are confidential and handled during the employee's normal working hours or at a time and place convenient to the

employee. The medical questionnaire is administered so that the employee understands its content. All employees are provided an opportunity to discuss the questionnaire and examination results with the physician or other licensed health care professional.

Before any initial examination or questionnaire is given, Campus Facilities will supply the physician or other licensed health professional with the following information so that he/she can make the best recommendation concerning an employee's ability to use a respirator:

- a. Type and weight of the respirator to be used by the employee;
- b. Duration and frequency of respirator use (including use for rescue and escape);
- c. Expected physical work effort;
- d. Additional protective clothing and equipment to be worn;
- e. Temperature and humidity extremes that may be encountered.

Once the physician or other licensed health care professional determines whether the employee has the ability to use or not use a respirator, he/she provides a written recommendation containing only the following information:

- a. Limitations on respirator use related to the medical condition of the employee, or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator;
- b. The need, if any, for follow-up medical evaluations; and
- c. A statement that the physician or other licensed health care professional has provided the employee with a copy of the written recommendation.

## **2. Follow-up medical examination:**

A follow-up medical examination will be provided if a positive response is given to any question among questions 1 through 8 in Section 2, Part A of Appendix C of 29 CFR 1910.134 or if an employee's initial medical examination demonstrates the need for a follow-up medical examination. The follow-up medical examination includes tests, consultations, or diagnostic procedures that the physician or other licensed health care professional deems necessary to make a final determination.

If the physician or other licensed health care professional finds a medical condition that may place the employee's health at increased risk if the respirator is used, a powered air-purifying respirator (PAPR), if medically authorized, will be provided until such time as a negative pressure respirator is medically authorized.

### **3. Additional medical examinations:**

Campus Facilities will provide additional medical evaluations for any of the following:

- a. An employee reports medical signs or symptoms that are related to ability to use a respirator;
- b. A physician or other licensed health care professional, supervisor, or the Program Administrator informs Campus Facilities that an employee needs to be reevaluated;
- c. Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation; or
- d. A change occurs in workplace conditions (e.g., physical work effort, protective clothing, and temperature) that may result in a substantial increase in the physiological burden placed on an employee.

Employees may contact the Occupational Medicine Program, Division of Pulmonary and Critical Care in the School of Medicine for a copy of their confidential medical evaluation or questionnaire.

## **VII. Fit Testing Procedures**

Fit testing will be done by following the fit test procedures listed in the Fit Test Appendix of OSHA 1910.134

Employees who use tight fitting respirators will be properly fitted and tested for a face seal prior to use of the respirator in a contaminated area. Quantitative or qualitative fit testing will be performed at least every 12 months or sooner as prescribed by policy, procedure, industry standards, or governmental regulations.

Quantitative fit testing will be performed for fit testing of full face piece respirators used in the negative pressure mode for protection greater than 10 times the exposure limit but not to exceed 50 times the exposure limit.

Campus Facilities employees are fit tested at the following times with the same make, model, style, and size of respirator that will be used:

- a. Before any of our employees are required to use any respirator with a negative or positive pressure tight-fitting face piece;
- b. Whenever a different respirator face piece (size, style, model, or make) is used;
- c. At least annually;
- d. Whenever the employee reports, or the, physician or other licensed health care professional, CF supervisor, or CF Program Administrator makes visual observations of changes in the employee's physical

condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight; and

- e. When the employee, subsequently after passing a QLFT or QNFT, notifies their CF Supervisor, CF Program Administrator, or physician or other licensed healthcare professional that the fit of the respirator is unacceptable. The employee will be retested with a different respirator face piece.

Employees with facial hair that comes between the sealing surfaces of the face piece or interferes with the valve function or employees with any other condition that interferes with the face-to-face piece seal or valve function will not be fit tested or permitted to wear tight fitting respirators. Also, the following is applicable to fit testing of respirators:

- a. If an employee wears corrective glasses or goggles or other personal protective equipment, ensure that such equipment is worn in a manner that does not interfere with the seal of the face piece to the face of the user.

## **VIII. Proper Use Procedures**

Once the respirator has been properly selected and fitted, its protection efficiency must be maintained. Campus Facilities ensures with written procedures that respirators are used properly in the workplace.

### **1. Face piece Seal Protection**

- A. Do not permit respirators with tight-fitting face pieces to be worn by employees who have:
  - a. Facial hair that comes between the sealing surface of the face piece and the face or that interferes with valve function; or
  - b. Any condition that interferes with the face-to-face piece seal or valve function.
- B. If an employee wears corrective glasses or goggles or other personal protective equipment, ensure that such equipment is worn in a manner that does not interfere with the seal of the face piece to the face of the user. Prescription glass inserts may be provided by Campus Facilities for employees who are required to wear a full face respirator.
- C. For all tight-fitting respirators, employees shall ensure that a user seal check is performed each time they put on the respirator using the procedures as follows:



- a. Positive pressure check: close off exhalation valve and exhale gently into the face piece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the face piece without any evidence of outward leakage of air at the seal.
- b. Negative pressure check: close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hands or by replacing the filter seals. Inhale gently so that the face piece collapses slightly and hold the breath for ten seconds. If the face piece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness is considered satisfactory.

## **2. Continuing Respirator Effectiveness**

- A. Appropriate surveillance must be maintained of work area conditions and degree of employee exposure or stress. When there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness, reevaluate the continued effectiveness of the respirator.
- B. Employees must leave the respirator use area immediately to prevent exposure:
  1. To wash their faces and respirator face pieces as necessary to prevent eye or skin irritation associated with respirator use; or
  2. If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the face piece; or
  3. To replace the respirator or the filter, cartridge, or canister elements.

If an employee must remove clothing or rinse off any contaminants, they must keep the respirator on until decontamination is complete to avoid inhalation exposure.

## **3. Maintenance and Care Procedures**

Campus Facilities provides each respirator user with a respirator that is clean, sanitary, and in good working order. The respirator user must clean and disinfect the respirator using the procedures recommended by the respirator manufacturer or equivalent procedures.

The respirators are cleaned and disinfected at the following intervals:

<b>Respirator type:</b>	<b>Are cleaned and disinfected at the following interval:</b>
Issued for the exclusive use of an employee	as often as necessary to be maintained in a sanitary condition
Issued to more than one employee individuals	before being worn by different individuals
Used in fit testing and training	After each use

#### **4. Storage**

Storage of respirators must be done properly and in accordance with manufacturer's instructions to ensure that the equipment is protected and not subject to environmental conditions such as contamination, dust, sunlight, excessive moisture, chemicals, etc. that may cause deterioration.

#### **5. Inspection**

In order to assure the continued reliability of respirator equipment, it must be inspected by the responsible employee on a regular basis. The frequency of inspection is related to the frequency of use. CF recommends the following:

<b>Respirator type:</b>	<b>Inspected at the following frequencies:</b>
All types used in routine situations	Before each use and during cleaning

All respirator inspections include inspection for the following:

- a. Respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the face piece, head straps, valves, connecting tube, and cartridges, canisters or filters; and
- b. Of elastomeric parts for pliability and signs of deterioration.

#### **6. Repairs**

Respirators that fail an inspection or are otherwise found to be defective are removed from service, and are discarded or repaired or adjusted in accordance with the following procedures:

- a. Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations and only with the respirator

- manufacturer's NIOSH-approved parts designed for the respirator;
- b. Repairs must be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed.
- c. Reducing and admission valves, regulators, and alarms must be adjusted or repaired only by a person properly trained.

## **7. Discarding of respirators**

Respirators that fail an inspection and are otherwise defective or not fit for use and cannot be repaired must be discarded. The following discarding procedure is used: cutting up the respirator and placing into general trash.

## **8. 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 Campus Facilities provides respirators for voluntary use, certain precautions should be taken to be sure that the respirator itself does not present a hazard.

Employees 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.
3. Do not wear the respirator into atmospheres containing contaminants for which it 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 the respirator so that it is not mistakenly used by someone else.

## **IX. Air Quality Procedures**

When atmosphere-supplying respirators are being used to protect employees it is essential to ensure that the air being breathed is of sufficiently high quality. Campus Facilities procedures to ensure adequate air quality, quantity, and flow of breathing air for atmosphere-supplying respirators include coverage of the following OSHA requirements:

### **1. Compressed Air, Compressed Oxygen, Liquid Air, and Liquid Oxygen Used for Respirators:**

- A. Compressed and liquid oxygen must meet the United States Pharmacopoeia requirements for medical or breathing oxygen.
- B. Compressed breathing air must meet at least the requirements for Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989, to include:
  - 1. Oxygen content (v/v) of 19.5-23.5%;
  - 2. Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;
  - 3. Carbon monoxide (CO) content of 10 parts per million (ppm) or less;
  - 4. Carbon dioxide content of 1,000 ppm or less; and
  - 5. Lack of a noticeable odor.
- C. Ensure that compressed oxygen is not used in atmosphere-supplying respirators that has previously used compressed air.
- D. Ensure that oxygen concentrations greater than 23.5% are used only in equipment designed for oxygen service or distribution.

### **2. Compressors:**

- A. Ensure that compressors used to supply breathing air to respirators are constructed and situated so as to:
  - 1. Prevent entry of contaminated air into the air-supply system;
  - 2. Minimize moisture content so that the dew point at 1 atmosphere pressure is 10 degrees F (5.56 deg. C) below the ambient temperature;
  - 3. Have suitable in-line air-purifying sorbent beds and filters to further ensure breathing air quality. Sorbent beds and filters must be maintained and replaced or refurbished periodically following the manufacturer's instructions; and

4. Have a tag containing the most recent change date and the signature of the person authorized by our company to perform the change. The tag must be maintained at the compressor.
- B. For compressors that are not oil-lubricated, ensure that carbon monoxide levels in the breathing air do not exceed 10 ppm.
- C. For oil-lubricated compressors, use a high-temperature or carbon monoxide alarm, or both, to monitor carbon monoxide levels. If only high-temperature alarms are used; the air supply must be monitored at intervals sufficient to prevent carbon monoxide in the breathing air from exceeding 10 ppm.

### **3. Breathing Air Couplings:**

1. Ensure that breathing air couplings are incompatible with outlets for non-respirable worksite air or other gas systems. No asphyxiating substance must be introduced into breathing air lines.

### **4. Filters, Cartridges, and Canisters:**

1. Ensure that all filters, cartridges and canisters used in the workplace are labeled and color-coded with the NIOSH approval label and that the label is not removed and remains legible.

## **X. Training**

### **1. General**

Employees who use respirators in the workplace shall receive respiratory training prior to initial use and at least annually thereafter.

Training shall include the following:

- Explanation of Campus Facilities Respiratory Protection Program, the OSHA regulations and NIOSH Respirator Standard;
- The name of the Campus Facilities and EH&S Program Administrators and their duties and responsibilities;
- Why respirators are necessary, and how improper fit, usage, and maintenance can compromise the protection ability of the respirator and give a false sense of security;
- Respiratory Hazards that may be encountered such as fumes, mists, dusts, etc.
- Hazard Assessments and Hazard Controls, Air Sampling

- Material Safety Data Sheets (MSDS); Threshold Limit Value (TLV), Permissible Exposure Limit (PEL's), Short Term Exposure Limit (STEL's) etc.
- The capabilities and limitations of the respirator;
- Proper selection process, types of respirators and fit factors, additional PPE requirements;
- How to wear, remove, use, inspect for repairs or replacement and perform a seal check on the respirator;
- Effective use in emergency situations, including respirator malfunction;
- Maintenance procedures and proper storage of the respirator;
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators;
- Fit test procedures

All employees trained must be able to demonstrate their knowledge of the respiratory training that they have received.

Records of the training given each individual will be found on file at Campus Facilities Safety.

## **2. Retraining**

Employees are to be retrained annually and when the following situations occur:

- A. Changes in the workplace or the type of respirator render previous training obsolete.
- B. Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill; or
- C. Any other situation arises in which retraining appears necessary to ensure safe respirator use.
- D. For special situations prescribed by policy or procedure, industry standards, or governmental regulations, more frequent retraining shall be required.

Employees may request retraining on any or all information at any time, if they feel the need for review.

## **XI. Program Evaluation**

At the Campus Facilities Department; the program evaluation, performed annually by the Program Administrator, involves the following:

1. Conducting evaluations of the workplace as necessary to ensure that the

provisions of the current written program are being effectively implemented and that it continues to be effective.

2. Regularly consulting employees required to use respirators to assess their views on program effectiveness and to identify any problems. Any problems that are identified during this assessment must be corrected. Factors to assess include, but are not limited to:
  - a. Respirator fit (including the ability to use the respirator without interfering with effective workplace performance)
  - b. Appropriate respirator selection for the hazards to which the employee is exposed
  - c. Proper respirator use under the workplace conditions the employee encounters
  - d. Proper respirator maintenance

## References

The following documents are helpful references:

- \* 29 CFR 1910.134, Respiratory Protection, and Appendices,
- \* 42 CFR 84, Approval of Respiratory Protective Devices,
- \* ANSI Z88.2, Respiratory Protection,
- \* NIOSH Guide to Industrial Respiratory Protection-1987 (however, this may be out of date),
- \* NIOSH Guide to the Selection and Use of Particulate Respirators Certified Under 42 CFR 84 (4/23/96).
- \* 49 CFR 173 and 178

## Attachments

- 1 Campus Facilities Respirator Fit Test Request Form
- 2 OSHA 1910.134 Appendix C – OSHA Respirator Medical Evaluation Questionnaire

Revised: March 4, 2004  
Revised: March 11, 2004  
Revised: March 17, 2004  
Revised: May 20, 2004  
Revised: June 2, 2004  
Revised: June 3, 2004  
Revised: June 8, 2004  
Revised: June 15, 2004  
Revised: July 21, 2004

**Attachment 1**  
**Campus Facilities Respirator Fit Test Request**

To: UMC E H & S Department  
From: Campus Facilities

Instructions for CF Dept.: Contact E H & S at 882-7018 to arrange appointment. Fill out this form and have Employee take this completed form to E H & S for fit test. \*\* Note: Employee must complete medical exam prior to fit test.

Attention E H & S: Please provide a respirator fit test and respirator components as follows:

Name of Employee: \_\_\_\_\_ Employee I.D. \_\_\_\_\_

Respirator Medical exam completed: \_\_\_\_\_ (date completed)

Respirator Type Needed: \_\_\_\_\_ Half mask \_\_\_\_\_ Full Face

Respirator Components Needed: \_\_\_\_\_ Organic Vapors \_\_\_\_\_ Acid Gas  
\_\_\_\_\_ HEPA \_\_\_\_\_ Other(describe)

Describe type work to be performed and hazards involved: \_\_\_\_\_:

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Signature of CF Safety or CF Supervisor	Date	CF Department	Phone #
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Dept. Mocode #: \_\_\_\_\_  
Peoplesoft account # \_\_\_\_\_

Date of form: May 13, 2004  
Revised: August 10, 2004  
Revised: August 18, 2004



Attachment 2

**Appendix C to §1910.134: OSHA Respirator Medical Evaluation Questionnaire (Mandatory)**

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

To the employee: Can you read (circle one): Yes/No

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

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):

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