

# HUMBOLDT STATE UNIVERSITY

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## FACILITIES MANAGEMENT INJURY & ILLNESS PROTECTION PROGRAM

**Policy No: 005-131104**

**Title: Respiratory Protection Program**

### INTRODUCTION

The California Department of Industrial Relations (DIR), Occupational Health & Safety Administration (OSHA) requires California employers to develop and implement a written respiratory protection program with required worksite-specific procedures and elements for respirator use whenever their employees are, or may be, exposed to airborne contaminants at, or above, the OSHA permissible exposure limit (PEL).

This program specifies the procedures used to enable the University to comply with CAL OSHA respiratory protection requirements (8 CCR 1529, 1531 and 5144). Control of atmospheric contamination should be achieved by use of administrative and/or engineering controls whenever possible. Personal protective equipment shall be a last consideration for achieving the requirements of this program.

The University Environmental Health & Safety Coordinator is the Respiratory Protection Program Administrator. Department/Unit managers and associated lead staff are responsible for implementation at job sites.

When respiratory protection is required, an appropriate respirator shall be provided at no cost to the employee. While the following list is not comprehensive, some examples of work areas and tasks where respirators may be required are:

- a. Facilities Management, Grounds Division - pesticides and dust
- b. Facilities Management, Trades Division - asbestos, paint aerosols, dust, welding fumes, and lead
- c. Facilities Management, Custodial Division – dust, cleaners, and floor stripping
- d. Office of Environmental Health & Safety - chemical exposure
- e. Instructional Support Technicians - dust and chemical exposure

### MEDICAL MONITORING

Using a respirator may place a physiological burden on employees that varies with the type of respirator worn, the job and workplace conditions in which the respirator is used, and the medical status of the employee. Accordingly, this section specifies the minimum requirements

for medical evaluation that employers must implement to determine the employee's ability to use a respirator.

1. General. The employer shall provide a medical evaluation to determine the employee's ability to use a respirator, before the employee is fit tested or required to use the respirator in the workplace. (Note: The employer may discontinue an employee's medical evaluations when the employee is no longer required to use a respirator.)
2. Medical evaluation procedures.
  - a. Employees shall complete the CalOSHA Respiratory Protection Medical Evaluation Questionnaire (Exhibit A - Attached). The questionnaire shall be handed to the physician or other licensed health care professional (PLHCP) who will evaluate the responses on the questionnaire. **DO NOT GIVE THE QUESTIONNAIRE TO ANYONE EXCEPT TO A DOCTOR OR PLHCP**
  - b. Medical evaluations shall be performed at the University's designated medical evaluation facility (contact University EH&S for current facility).
3. Follow-up medical examination.
  - a. The employer shall ensure that a follow-up medical examination is provided for an employee who gives a positive response to any question among questions 1 through 8 in the medical questionnaire or whose initial medical examination demonstrates the need for a follow-up medical examination.
  - b. The follow-up medical examination shall include any medical tests, consultations, or diagnostic procedures that the PLHCP deems necessary to make a final determination.
4. Administration of the medical questionnaire and examinations.
  - a. The medical questionnaire and examinations shall be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee. The medical questionnaire shall be administered in a manner that ensures that the employee understands its content.
  - b. The employer shall provide the employee with an opportunity to discuss the questionnaire and examination results with the PLHCP.
5. Supplemental information for the PLHCP.
  - a. The following information must be provided to the PLHCP before the PLHCP makes a recommendation concerning an employee's ability to use a respirator:
    - 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.
6. Additional medical evaluations.
  - a. At a minimum, the employer shall provide additional medical evaluations that comply with the requirements of this section if:
    - i. An employee reports medical signs or symptoms that are related to ability to use a respirator;
    - ii. PLHCP, Department/Unit managers or associated lead staff, or the Respirator Protection Program Administrator informs the employer that an employee needs to be reevaluated;

- iii. Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation; or
- iv. A change occurs in workplace conditions (e.g., physical work effort, protective clothing, or temperature) that may result in a substantial increase in the physiological burden placed on an employee.

No employee will be assigned tasks requiring the use of a respirator until a PLHCP determines that the employee will be able to maintain normal physical function while wearing a respirator.

### **ASSIGNMENT AND FIT TESTING**

Before an employee may be required to use any respirator with a negative or positive pressure tightfitting face piece, the employee must be fit tested with the same make, model, style, and size of respirator that will be used.

Employees will be allowed to try on several different models and sizes to find the respirator that allows the best facial fit. Each individual will be assigned a respirator for his/her exclusive use. Respirators will be marked to indicate to whom it is assigned.

Fit testing will be conducted for all respirator users annually. Fit testing will be conducted by the University's designated fit testing facility (contact EH&S for current facility). Quantitative and qualitative fit testing will be conducted according to the procedures prescribed in 8 CCR §5144 Appendix A and 8 CCR §1529 Appendix C.

Employees are required to complete the positive and negative pressure fit check each time they use a respirator. Tight fitting respirator face pieces may not be worn if facial hair comes between the sealing surface of the face piece or interferes with valve function. Corrective glasses, safety goggles or other personal protective equipment shall be worn in a manner that does not interfere with respirator fit.

### **TRAINING**

Employees designated to wear respirators will receive initial and annual refresher training covering the following topics:

- the need for respiratory protection
- selection fitting
- use and care of respirators
- use of respirators in emergency situations
- user seal check procedures
- respirator cleaning procedures
- equipment limitations
- medical monitoring requirements

The University's designated fit test facility (contact EH&S for current facility) will perform fit testing, deliver training and provide a copy of this written program to each trainee.

## SELECTION OF RESPIRATORS

Respirator selection will be based on:

- chemical type
- hazard classification
- the protection factor required
- guidance issued in ANSI Standard Z88.21 - 1980

Only respirators tested and certified by NIOSH may be used.

- Selection of respirators for asbestos related work shall be in accordance with California Code of Regulations §1529(h)(3).
- Selection of respirators for lead related work shall be in accordance with California Code of Regulations §1532.1(f).
- Selection of respirators for all other materials shall be in accordance with the requirements of the applicable CalOSHA standard for that material. If no standard exists then the Respiratory Protection Program Administrator shall determine the proper protective equipment.

Department/Unit managers or associated lead staff will forward product information to the Respiratory Protection Program Administrator prior to ordering respirators or cartridges to assure that appropriate equipment has been selected.

Air purifying and powered air purifying respirators are the only types of respiratory protection used at the University. This program does not address the use of supplied air respirators. **Air purifying respirators will not provide adequate protection in oxygen deficient (<19.5%) environments or when chemical contamination exceeds concentrations that are considered Immediately Dangerous to Life and Health (IDLH). Never enter an environment in which the hazards are unknown or the adequacy of oxygen is questionable. If the exposure level cannot be identified or reasonably estimated, it must be assumed to be IDLH. Suspected IDLH conditions must be reported immediately to the area supervisor and the respiratory protection program administrator.**

## EMERGENCY USE OF RESPIRATORS

Respirators may only be used for emergency response if the exposure level to chemicals of concern can be established as less than IDLH and verified to be within the particular air purifying respirator's protective capacity. **Entry into unknown levels of chemical contamination may only be performed by qualified Fire Department, contract or CSU mutual aid emergency response staff using supplied air respirators.** HSU staff will make the request for assistance and then isolate and deny entry into the area until the level of hazard can be identified.

## INSPECTION, MAINTENANCE & SANITATION

All respirators shall be inspected by the wearer prior to each use. Respiratory equipment must be repaired or replaced as necessary due to wear and deterioration. The following are reasons for respirator replacement:

- clogged filters
- jammed valves
- loss of strap elasticity
- detection of an odor or taste
- eye or throat irritation
- employee discomfort
- puncture or tears
- loss of facial seal

Air purifying cartridges will be replaced according product label directions, positive end of service life indicators, or at the first indication of odor, taste or irritation. Employees may change air purifying cartridges whenever they detect an increase in breathing resistance.

Employees will be permitted to leave the work area to wash their faces and respirator face pieces whenever necessary to prevent skin irritation associated with respirator use. Respirators are issued for exclusive use of each employee and must be cleaned and disinfected as often as necessary to maintain a sanitary condition. After cleaning, thoroughly rinse the respirator in warm water to remove traces of cleaning solution and hang to dry. Respirators shall be cleaned and sanitized before they are reassigned to another individual. Respiratory protective equipment shall be stored in plastic bags to protect against dust, sunlight, extreme temperatures, excessive moisture or damaging chemicals.

## **RECORDKEEPING**

Records will be kept to document the following:

- employee training medical monitoring
- personal exposure levels derived from air monitoring
- any problems encountered during the use of respiratory equipment

Fit test and training records will be stored electronically on the shared drive and hard copies maintained for at least 3 years by the Facilities Management Timekeeper.

## **PROGRAM EVALUATION**

Department/Unit managers or associated lead staff will conduct periodic inspections to ensure that the written Respiratory Protection Program is being implemented and that respiratory protective equipment is appropriate to the hazards encountered in the work area. Employees will be consulted to obtain input regarding the program's effectiveness. EH&S will seek similar employee consultations during respiratory protection training sessions and work area visits.

## **REFERENCES**

- CAL OSHA respiratory protection requirements (8 CCR 1529, 1531 and 5144)
- California Department of Industrial Relations, California Code of Regulations (8 CCR §5144 Appendix A and 8 CCR §1529 Appendix C)
- ANSI Standard Z88.21 - 1980
- California Department of Industrial Relations, California Code of Regulations §1529(h)(3).
- California Department of Industrial Relations, California Code of Regulations §1532.1(f)

**EXHIBITS- Attached**

**A. Confidential Medical Questionnaire**

# HSU EH&S Respiratory Protection Form

Name and HSU Employee ID #:

**SECTION C – Confidential Medical Questionnaire**

Cal/OSHA requires that the following information be provided by every employee who has been selected to use any type of respirator. Your supervisor 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 in this section. ***Please take your completed questionnaire (Section C – total of 4 pages) in a sealed envelope labeled with your name AND HSU Employee ID # to Mad River Occupational Health for review by a licensed medical health professional.*** Questions regarding the questionnaire or your health and respirator use - call EH&S at Ext 5711.

\* Can you read?  YES  NO

Height: _____ ft. _____ in.	Weight: _____ lbs.	Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female	Birthdate: _____
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1. Has your employer told you how to contact the health care professional who will review this questionnaire?  
 YES  NO
  
2. Have you worn a respirator?  
 YES  NO      If “yes,” what type(s):
  
3. If you’ve used a respirator, have you ever had any of the following problems? Check all that apply:  
 None     Eye irritation     Skin allergies or rashes     Anxiety  
 General weakness or fatigue     Any other problem that interferes with your use of a respirator
  
4. Do you currently smoke tobacco, or have you smoked tobacco in the last month?  
 YES  NO
  
5. Have you ever had any of the following conditions? Check all that apply:  None  
 Seizures (fits)     Diabetes (sugar disease)     Allergic reactions that interfere with your breathing  
 Trouble smelling odors  
 Claustrophobia (fear of closed-in places)
  
6. Have you ever had any of the following pulmonary or lung problems? Check all that apply:  None  
 Asbestosis     Asthma     Chronic bronchitis  
 Emphysema     Pneumonia     Tuberculosis  
 Silicosis     Pneumothorax (collapsed lung)  
 Lung cancer     Broken ribs     Any chest injuries or surgeries  
 Any other lung problem that you’ve been told about

# HSU EH&S Respiratory Protection Form

Name and HSU Employee ID #:

7. Do you currently have any of the following symptoms of pulmonary or lung illness?

Check all that apply:

- None  Shortness of breath
- Shortness of breath when walking fast on level ground or walking up a slight hill or incline
- Shortness of breath when walking with other people at an ordinary pace on level ground
- Have to stop for breath when walking at your own pace on level ground
- Shortness of breath when washing or dressing yourself
- Shortness of breath that interferes with your job
- Coughing that produces phlegm (thick sputum)
- Coughing that wakes you early in the morning
- Coughing that occurs mostly when you are lying down
- Coughing up blood in the last month  Wheezing
- Wheezing that interferes with your job  Chest pain when you breathe deeply
- Any other symptoms that you think may be related to lung problems

8. Have you ever had any of the following cardiovascular or heart problems? Check all that apply:

- None  Heart attack  Stroke  Angina  Heart failure
- Swelling in your legs or feet (not caused by walking)
- Heart arrhythmia (heart beating irregularly)  High blood pressure
- Any other heart problem that you've been told about

9. Have you ever had any of the following cardiovascular or heart symptoms? Check all that apply:

- None  Frequent pain or tightness in your chest
- Pain or tightness in your chest during physical activity
- Pain or tightness in your chest that interferes with your job
- In the past two years, have you noticed your heart skipping or missing a beat
- Heartburn or indigestion that is not related to eating
- Any other symptoms that you think may be related to heart or circulation problems

10. Do you currently take medication for any of the following problems? Check all that apply:

- None  Breathing or lung problems  Heart trouble  Blood pressure
- Seizures (fits)

11. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire?

- YES  NO

12. 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 medication(s) if you know them:

13. 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



# HSU EH&S Respiratory Protection Form

Name and HSU Employee ID #:

14. How often are you expected to use the respirator(s)? (check all that apply)

- |   |  |
|---|--|
| <input type="checkbox"/> Escape only (no rescue)    | <input type="checkbox"/> 2 to 4 hours per day  |
| <input type="checkbox"/> Less than 5 hours per week | <input type="checkbox"/> Over 4 hours per day  |
| <input type="checkbox"/> Less than 2 hours per day  | <input type="checkbox"/> Emergency rescue only |

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

- Light (less than 200 kcal per hour): 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.

YES  NO

If "yes," how long does this period last during the average shift: \_\_\_\_\_ hours \_\_\_\_\_ minutes

- Moderate (200 to 350 kcal per hour): 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.

YES  NO

If "yes," how long does this period last during the average shift: \_\_\_\_\_ hours \_\_\_\_\_ minutes

- Heavy (above 350 kcal per hours): 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.)

YES  NO

If "yes," how long does this period last during the average shift: \_\_\_\_\_ hours \_\_\_\_\_ minutes

16. 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:

17. Will you be working under hot conditions (temperature exceeding 77°F)?

YES  NO

18. Will you be working under humid conditions?

YES  NO

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

20. At work or at home, have you ever worked around the following? Please check all hazardous solvents, hazardous airborne chemicals (e.g., gases, fumes, or dust), or hazardous chemicals that you have come into any contact with:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Solvents                  | <input type="checkbox"/> Gases                            | <input type="checkbox"/> Farming, animal dusts, agr. products |
| <input type="checkbox"/> Mining                    | <input type="checkbox"/> Grinding                         | <input type="checkbox"/> Welding                              |
| <input type="checkbox"/> Asbestos                  | <input type="checkbox"/> Beryllium                        | <input type="checkbox"/> Arsenic                              |
| <input type="checkbox"/> Aluminum                  | <input type="checkbox"/> Coal dust                        | <input type="checkbox"/> Mushroom farms                       |
| <input type="checkbox"/> Flour of any grain        | <input type="checkbox"/> Refinish furniture               | <input type="checkbox"/> Refurbish automobiles                |
| <input type="checkbox"/> Chromium                  | <input type="checkbox"/> Nickel                           | <input type="checkbox"/> Tars, tar products                   |
| <input type="checkbox"/> Lead shot or leaded glass | <input type="checkbox"/> Silica, glass, ceramics, pottery | <input type="checkbox"/> Chemical or biological agents        |

# HSU EH&S Respiratory Protection Form

Name and HSU Employee ID #:

**Questions 21 to 26 below must be answered by every employee who has been selected to use either a full-face piece respirator or a self-contained breathing apparatus (SCBA). For employees who have been selected to use other types of respirators, answering these questions is voluntary.**

21. Have you ever lost vision in either eye (temporarily or permanently)?  
 YES     NO
22. Do you currently have any of the following vision problems?  
 YES     NO    If "yes," check all that apply.  
 Wear contact lenses                       Wear glasses  
 Color blind                                       Any other eye or vision problem
23. Have you ever had an injury to your ears including a broken eardrum?  
 YES     NO
24. Do you currently have any of the following hearing problems? Check all that apply.  
 None     Wear a hearing aid  
 Difficulty hearing                               Any other hearing or ear problem
25. Have you ever had a back injury?  
 YES     NO
26. Do you currently have any of the following musculoskeletal problems? Check all that apply.  
 None     Weakness in any of your arms, hands, legs, or feet     Back pain  
 Difficulty fully moving your arms and legs  
 Pain or stiffness when you lean forward or backward at the waist  
 Difficulty fully moving your head up or down  
 Difficulty fully moving your head side to side  
 Difficulty bending at your knees               Difficulty squatting to the ground  
 Difficulty climbing a flight of stairs or ladder while carrying more than 25 lbs  
 Any other muscle or skeletal problem that interferes with using a respirator

By my signature below I affirm that the information listed above is true and accurate to the best of my knowledge.

\_\_\_\_\_  
Employee Signature

\_\_\_\_\_  
Today's Date

**PLEASE MAKE SURE TO PUT YOUR NAME AND HSU EMPLOYEE ID # ON ALL PAGES AND ON THE SEALED ENVELOPE MARKED "CONFIDENTIAL" CONTAINING THE COMPLETED MEDICAL QUESTIONNAIRE, SECTION C**