


Policy Title: Respiratory Protection			
Policy #:	FA-CPS-009		
Responsible Office:	Campus Public Safety		
Responsible Administrator:	Vice President for Finance and Administration		
Date Reviewed:	August 2014		Revisions Made? Yes ___ No <u>X</u>
Date of Next Review:	August 2016		

PURPOSE

The purpose of this procedure is to create a safe working environment through clarity, identified hazards, training accountability and medical surveillance.

AUDIENCE

WOU employees who could potentially come in contact with gases, vapors, mists, fumes, asbestos fibers, dust particles and oxygen deficiency.

DEFINITIONS

N/A

POLICY STATEMENT

It is the policy of Western Oregon University to require attendance and/or provide a respiratory protection program for employees who could potentially come in contact with gases, vapors, mists, fumes, asbestos fibers, dust particles and oxygen deficiency.

PROCEDURES

A. Employee Medical Evaluations

Each employee required by Western Oregon University to wear a respirator, or who requests an air-purifying respirator, must be medically evaluated before being fit-tested. The supervisor must make arrangements for each employee to have a medical evaluation by a professionally licensed health care provider (PLHCP). Western Oregon University supervisors can utilize the WOU Health Services PLHCP to review the Medical Evaluation Questionnaire for their employees. Any further services requiring testing will be referred to an outside PLHCP. Supervisors of employees in high-risk activities such as Asbestos/Lead Abatement, Hazardous Chemicals, etc. requiring an annual

physical exam must contact an outside PLHCP. WOU's Health Services has limited resources and cannot provide these services.

The supervisor must provide the confidential *OSHA Respirator Medical Evaluation Questionnaire* to each employee, who must complete it and deliver it to the PLHCP.

The supervisor must also provide the PLHCP with the following information:

- (1) the type and weight of the respirator each employee will use;
- (2) the duration and frequency of use;
- (3) the expected physical work effort;
- (4) any other protective clothing and equipment worn;
- (5) temperature and humidity extremes at the workplace; and
- (6) air contaminants and concentration levels that each employee may encounter.

The PLHCP will discuss the results of the evaluation with the employee and provide a written determination to the supervisor. The determination will not contain confidential medical information but will include:

- (1) the PLHCP's opinion regarding the employee's ability to tolerate a respirator;
- (2) any limitations on respirator use;
- (3) any need for follow-up evaluations, and
- (4) a statement that the employee has been informed of the determination.

If the PLHCP recommends alternative respiratory protection, such as a powered air-purifying respirator, the program administrator will comply with the recommendation.

The supervisor along with Campus Public Safety/Occupational Environmental Safety office will maintain a file of the PLHCP's written determination for each employee.

Employees will receive follow-up medical evaluations under the following conditions:

- (1) The employee reports medical signs or symptoms related to respirator use;
- (2) The PLHCP, a supervisor, or the Safety Officer recommends a re-evaluation;
- (3) Fit-test or other program information indicates a need for re-evaluation;
when changes in the workplace increase respiratory stress on an employee.

B. Respirator Use

Approved Respirator - Approved Niosh Respirators are required under the following conditions:

- (1) *Hazardous Chemical* - when a hazardous chemical is being used that potentially may expose the employee to gas vapors, dust, fumes, mists or oxygen displacement.
- (2) *Safety Data Sheets* may recommend a specific respirator for use with certain chemicals. SDS should be checked on every chemical to determine if respiratory protection is required.
- (3) *Immediate Exposure Area* - Respirator use is required if a person is in the immediate exposure area even though the person is not working with a chemical.

IF IN DOUBT, WEAR A RESPIRATOR.

Potential Exposures

- ☠ Welding, torch cutting
- ☠ Application of paints with hazardous chemical ingredients
- ☠ Asbestos abatement
- ☠ Pesticide/herbicide applications
- ☠ Chemical adhesives
- ☠ Acids, caustics or toxic fumes
- ☠ Excessive dust atmosphere (sanding, demolition)
- ☠ Insulation application
- ☠ Cleaners, solvents
- ☠ Oxygen deficiency in confined spaces (no employee, contractor or agent of the State is to enter a potential oxygen deficient space without supplied air or self-contained breathing apparatus) etc.

Employee Responsibility - All employees are required to be familiar with and adhere to the respiratory protection program in accordance with O.A.R. 437-129-020.

C. TRAINING

Employees using respirators due to the possibility of exposure are required to know:

(1) Types of Respirators:

- *Disposable* - Maintenance free half masks are designed to filter out particles or trap/hold gases in small concentrations and are designed to be disposed of after use.
- *Reusable Half Mask* - Cartridge reusable half mask respirators are designed to capture and lower gases, vapors and/or particles to safe levels prior to entering your airway. It is important to use the specific cartridge designed for the hazard you are exposed to.
- *Full Face* - This is similar to the half mask with added protection to eyes and face. It covers the face from under the chin to the forehead and provides a higher degree of protection than half masks.
- *Power Air Purifying (PAPR)* - Uses a battery powered blower that passes contaminated air through a cartridge or filter. Supplies air at a positive pressure.
- *Supplied Air Respirator, Self-Contained Breathing Apparatus* - Western does not utilize supplied air respirators or self-contained breathing apparatus. In the event there is an oxygen deficient atmosphere, steps will be taken to ventilate the area to increase oxygen to 21%.

All five respirators noted above are designed for different applications with different levels of protection based on hazard exposure. **ALL SAFETY PROCEDURES ARE TO BE FOLLOWED PER THE MANUFACTURERS RECOMMENDATIONS ON EACH SEPARATE RESPIRATOR USED.**

(2) Respirator Cartridges

The following are the color coded cartridges representing the filtering capability:

Color	Filters	Examples
Black	Organic vapor	Pesticides, lacquers, enamel mists, dry cleaning solvent
White	Acid Gases	Chlorine, hydrogen, chloride, sulfur dioxide
Yellow	Organic vapors and acids	Organic vapors, chlorine, hydrogen chloride, sulfur dioxide
Green	Ammonia & methyl amine	Ammonia and Methyl Amine
Gray	Dusts, fumes and mists	Dusts, fumes and mists
Purple	Highly toxic particulates	Lead, asbestos

Filters are also available in combinations of black/purple, yellow/purple, white/purple, and green/purple. A filter becomes inoperable when breathing becomes more difficult or the exposure of cartridge to a hazardous chemical exceeds the manufacturer's recommendation.

(3) Respirator Fit Test

One-half and full mask respirator:

- *Position* - straps and respirator are to be worn according to manufacturer's recommendations.
- *Face Piece Adjustment* - Your chin should be seated firmly in the chin cup with a good seal around the mask. (No air gaps at the seal.) Proper fit must occur each time the respirator is worn.
- *Broken Seal* - This may be caused by worn parts, hair growth, glasses or clothing.
- Several models and brands of respirators are required to be available for employee testing. A mirror is to be available for the employee fit test.

#1 Qualitative Fit Test - to be performed each time a negative pressure respirator is used or seal broken (1/2 mask or full face):

- i. *Positive pressure test* - Place hands over exhalation valves and gently breath out, causing the mask to bulge out a little. If no air escapes you have a good fit.
- ii. *Negative pressure test* - Place hands over the inhalation valves and breathe in gently. The mask should collapse against your face. If you breathe in for 10 seconds with the face piece collapsed and no air leaks in, you have a good fit. (Follow the manufacturer's instructions.)

#2 Qualitative Fit Test - This fit test, commonly known as the irritant smoke test, is a pass/fail method for respirator face seal on half and full face respirators.

- I. The employee performs the #1 Qualitative Fit Test to ensure proper seal with a Hepa Cartridge for 10 minutes.
- II. The employee is exposed to a small amount of irritant to ensure the employee is capable of reacting to the chemical.

- III. The employee will affix respirator on face and test for proper fit as stated in #1 Qualitative Fit Test (i, ii) above.
- IV. The tester places a small amount of Stannic Oxide about the respirator seal with the employee moving their head up and down and side to side while talking to the tester. If leakage occurs the tested employee will begin to cough and choke. (This reduces the likelihood of a person pretending to pass the fit test.)

NOTE: If a respirator is not sealing properly a larger or smaller respirator may need to be used.

Caution - Stannic Oxide is an irritant smoke that is irritating to the eyes, skin and mucous membranes. If an employee is highly sensitive to the irritant smoke, Isoamyl Acetate (Banana Oil) should be used.

(4) MAINTENANCE AND STORAGE

- a. **Cleaning** - After every use the respirator must be cleaned and stored in a plastic bag or tight container. The following is the procedure for cleaning the respirator:
 - I. Remove the filter cartridges (not to be washed)
 - II. Immerse and clean the respirator in warm detergent and water solution until all foreign matter is removed. Re-rinse in clear, warm water and allow to dry.
 - III. Attach a new or re-install the previous filter cartridges to respirator, based on chemical or particulate exposure. Place respirator in protected environment (plastic bag, coffee can, etc.).

- b. **Maintenance**
 - I. Worn or defective parts are to be replaced according to the manufacturer's recommendations.
 - II. Rubber exhalation and inhalation valves should be pliable and maintain their position as recommended by the manufacturer.
 - III. Straps and fasteners should be adjustable and free from defects.
 - IV. Repairs or replacing parts are to be done by a competent and experienced person.

NOTE: Maintenance is to be documented and routinely completed after every use, or no later than monthly, by a competent and trained person.

D. MEDICAL REQUIREMENTS

- (1) **Employees** who regularly use respirator protection will have an **annual** medical exam by a physician specializing in occupational diseases.
- (2) **Supervisors** who have employees under the respirator protection program are required to arrange annual medical exams for each employee to include a baseline exam at the beginning of employment. This must occur prior to respirator use.

- (3) **Departments** are responsible for medical examinations of employees unless the exam is covered by a separate exposure program.
- (4) **30 Days** - Employees who perform asbestos, cadmium or lead abatement totaling more than 30 days a year are required to have annual medical exams that include:
 - Medical and work history (OSHA questionnaire)
 - General physical examination
 - Pulmonary function test
- (5) **Persons** having health or medical problems who are using a respirator at anytime are required to have an annual medical exam.
- (6) **Medical exam records** will be kept in a medical file at University Public Safety Office for 30 years beyond employee employment.

E. PROGRAM EVALUATION AND ACCOUNTABILITY

Supervisor Responsibilities:

- (1) Have employee complete Medical Evaluation Questionnaire and medical evaluation by a PLHCP.
- (2) Arrange respirator fit test training annually when using negative pressure respirators.
- (3) Arrange annual physical exam.
- (4) Monitor employee respirator use.
- (5) Maintain training and maintenance records on employee respirators.

Employee Responsibilities:

- (1) Complete Medical Evaluation Questionnaire and medical evaluation by a PLHCP.
- (2) Complete respirator fit test prior to respirator use (negative pressure types).
- (3) Obtain an annual physical examination.
- (4) Wear a respirator in all conditions as outlined by this procedure or as required by the chemical or exposure.
- (5) Routinely inspect respirator for maintenance, cleaning and repair after each use and no less than monthly. (Maintenance and repairs are to be completed by a trained and competent person.)

FORMS

NEGATIVE PRESSURE RESPIRATOR MEDICAL RELEASE

Western Oregon University Respiratory Protection Program requires a medical release for employees who wear a negative pressure respirator.

Employee / Student

Job Title / Activity

Hazards exposed to requiring respirator use

The employee noted above is medically capable of wearing a negative pressure respirator.

Yes _____ No _____

If the employee is not able to wear a negative pressure respirator, please provide reason.

Physician's Name Print / Typed

Physician's Signature

Date

- Discrepancies Repaired: _____

AUTHORITY

OAR 437, Division 2 (29 CFR 1910) (http://www.osha-slc.gov/pdf/rules/division_2/div2_1.pdf)

RESPONSIBILITY

The Respiratory Protection program, services and oversight for compliance to statutes and rules is the responsibility of the Vice President of Business and Finance through Campus Public Safety / Occupational Environmental Safety division. In addition, all supervisors and managers are responsible for the health, safety, welfare and training of those employees under their supervision.

Campus Public Safety is responsible for this policy and may be contacted at 503-838-8481 or safety@wou.edu.

Alternate formats of this policy may be requested from the Office of Human Resources.