Respiratory Protection Program

Purpose and Scope

The purpose of the Respiratory Protection Program is to ensure West Chester University employees are protected from respiratory hazards. A respiratory hazard exists when airborne contaminants, including particulates, vapors, and gases, exceed established exposure limits or in environments with insufficient oxygen.

Whenever possible, elimination, substitution, or engineering controls will be utilized to provide protection from respiratory hazards. However, whenever these controls are not feasible, or while they are being initiated, respirators shall be worn to protect from respiratory hazards.

This program establishes the responsibilities and procedures for the determination, selection, and use of respirators at West Chester University, including the voluntary use of respirators.

This program applies to all respirator use at West Chester University.

Responsibilities

Environmental Health and Safety

- Establishing and maintaining the respiratory protection program.
- Evaluating work areas, operations, or tasks for respiratory hazards and determining necessary controls, including respirators.
- Providing guidance for respirator selection.
- Arranging for and/or conducting employee training.
- Monitoring respirator use to ensure respirators are used accordance with their current certifications.
- Monitor proper storage and maintenance of respiratory protection equipment.
- Conducting, arranging, and/or overseeing respirator fit testing.
- Administering the medical surveillance program.
- Maintaining records required by the program.
- Reviewing and updating the program as needed.

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Supervisor/Manager

- Supervisors must be knowledgeable of work areas, operations, or tasks within their unit that require respirator use, and they are responsible for ensuring the Respiratory Protection Program is implemented where required. In addition, supervisors are responsible for:
    - Monitoring work areas and notifying EHS of potential respiratory hazards.
    - Coordinating with EHS to evaluate operations or tasks to determine appropriate controls.
    - Notifying EHS of new employees requiring respirators.
    - Ensuring employees under their supervision (including new hires) have received appropriate training, fit testing, and annual medical evaluations.
    - Ensuring the availability of appropriate respirators and accessories.
    - Providing adequate storage facilities for respirators and accessories.
    - Ensuring respirators are properly cleaned, maintained, and stored.

Employees

- Employees are required to wear their respirators when required in the manner they have been trained. In addition, employees are responsible for:
    - Reporting potential respiratory hazards to supervisor.
    - Only wearing the respirator as instructed.
    - Attending training, fit testing and medical evaluation.
    - Inspecting respirator for defects or missing parts and report any malfunctions to supervisor immediately.
    - Cleaning and storing the respirator as instructed.

Procedures

Identification and Assessment of Respiratory Hazards

- EHS will, upon the request of an employee, supervisor, or other departmental representative conduct a workplace assessment to identify whether a specific work area, operation, or task presents a respiratory hazard. The assessment will include the following:
    - Chemical, physical, or biological agents present in the work environment.
    - Physical state of contaminants (gas, vapor, dust, aerosol, fume).
    - Review of established exposure limits.
    - Concentration of contaminant in air.
    - Potential for oxygen deficiency or IDLH environment.
    - Nature and duration of work activity.
    - Ventilation or other controls.
- Exposure monitoring may be conducted by EHS or a third-party consultant as part of the workplace assessment.
- If a respiratory hazard exists, EHS will identify appropriate control measures, including respirators.
- EHS will reassess work areas, operations, or tasks if work conditions change or new hazards are introduced.

Respirator Selection

- Respirators will be selected based upon the workplace assessment described in Section 2.
- All respirators, filters, cartridges, and canisters selected must be NIOSH (National Institute for Occupational Safety and Health) certified, and the NIOSH label must not be removed or defaced while equipment is in use.
- A list of jobs that require the use of respirators at West Chester University is found in Appendix A.

Medical Evaluation

- Employees who are required to wear tight-fitting respirators must pass a medical evaluation performed by a physician or other licensed health care professional (PLHCP) to determine if they are medically fit to use a respirator.
- Medical evaluations will be coordinated by EHS.
- Medical evaluations will be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee. The medical evaluation involves the completion of a medical questionnaire, and may include a limited physical examination, baseline laboratory testing, a pulmonary function test, a chest x-ray and/or other specific medical tests as specified by the physician or PLHCP. Medical evaluation procedures are found in Appendix B.

Fit Testing

- Employees using respirators with a tight-fitting facepiece must be fit tested.
- Fit testing is conducted prior to initial use and annually thereafter. An additional fit test is required whenever there are changes in the employee's physical condition that could affect respirator fit, such as facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.
- Employees will be fit tested with the make, model, and size of respirator that they will wear. Employees will be provided with several models and sizes of respirators to ensure optimal fit and comfort. Employees will need to be fit tested before using a different make, model, and/or size facepiece.
- Fit testing will be performed by EHS or by individuals properly trained and approved by EHS. Currently, the Facilities Safety Coordinator is the only person properly trained and approved by EHS to perform respirator fit testing. Respirator fit test exercises, the fit test form, and user seal check procedures are found in Appendix C-1.

Respirator Use

- Respirators shall be used in accordance with the following procedures/limitations:
  - Training received on the use of each particular model.
  - NIOSH certification assigned to particular respirator.
  - Tight-fitting respirators shall not be worn by employees who have facial hair or any condition that interferes with the face-to-facepiece seal or valve function.
  - Corrective glasses, goggles or other personal protective equipment shall wear such equipment in a manner that does not interfere with the face-to-facepiece seal or valve function.
  - Employees wearing tight-fitting respirators shall perform user seal checks prior to each use (Appendix C).

- If breakthrough is detected, there is a change in breathing resistance, and/or leakage of the facepiece is detected, the respirator shall be removed in a safe area. Employees shall inform supervisor of any respirator malfunction and replace or repair the respirator prior to reuse.
    - Supervisors shall ensure employees receive the needed parts to repair the respirator or provide employees with new respirators.
- For entry into areas presenting the potential for IDLH conditions, employees shall follow permit required confined space procedures specified in the Facilities Confined Space Program.

Maintenance and Care of Respirators

- University employees using negative or positive pressure tight-fitting facepiece respirators must follow the following maintenance and care procedures:
    - Respirators shall be cleaned and disinfected using procedures outlined in Appendix D
    - Respirators shall be stored to protect them from damage, dust, contamination, sunlight, extreme temperatures, excessive moisture, and damaging chemicals. They shall be packed or stored to prevent deformation of the facepiece and exhalation valve.
    - Respirators shall be inspected before each use and during cleaning.
    - SCBA and emergency respirators shall be inspected monthly and checked for proper function before and after each use
    - Respirator inspections shall include a check of the respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the facepiece, head straps, valves, connecting tube, and cartridges, canisters or filters, and a check of elastomeric parts for pliability and signs of deterioration.

Voluntary Use of Respirators

- Voluntary use of N95 Respirators
    - N95 respirators may be worn on a voluntary basis for activities involving low-level, non-hazardous nuisance dust or particulate.
    - Voluntary respirator use must be approved by the Supervisor in coordination with EHS.
    - Employees must read and heed instructions provided by the manufacturer regarding use, maintenance, care, and limitations.
    - Employees must be provided with, sign, and date the information regarding Voluntary N95 Respirator Use in Appendix E.
    - Employers are not required to provide any medical evaluation or fit test for voluntary use of an N95.
- Voluntary use of other types of tight-fitting respirators shall be reviewed by EHS and shall require medical clearance, training, and fit testing. Voluntary use of loose-fitting respirators shall require proper training and a review of Appendix D.

Training

- Employees who require respiratory protection must receive training before using a respirator. This training must be conducted annually and/or whenever retraining is deemed necessary due to changes in workplace conditions affecting respirator use. The training will be conducted by EHS and will include the following:

- Respiratory hazards
- Proper selection and use of respirator
- Limitations and capabilities of the respirator.
- Respirator donning, doffing, and user seal checks.
- Respirator inspection.
- Respirator maintenance and storage.
- Recognition of medical signs and symptoms that may limit or prevent the effective use of respirators.

Record Keeping

- The following respiratory protection program records shall be maintained by the Department of Environmental Health and Safety:
    - Copy of Respiratory Protection Program
    - Medical evaluation records
    - Fit testing records
    - Access to these records is available upon request for all affected employees, designated representatives and to applicable regulatory agencies.

Reviewed: ***February, 2026***

Appendix A: Work Requiring Respirators

Examples of work that may require the use of respirators includes, but is not limited to:

- Asbestos abatement activities
- Abrasive blasting
- Cutting or melting lead or stripping lead-based paints from surfaces
- Welding or burning
- Painting, especially with epoxy or organic solvent coatings
- Using solvents, thinners, degreasers, or other volatile chemicals
- Activities which generate large amounts of dust
- Working in a confined space
- Using formaldehyde to decontaminate a space
- Activities which may generate bioaerosols

The following departments/job assignments are included in the West Chester University Respiratory Protection Program:

- Asbestos Abatement Crew
  - North 7700-30 half-face, air-purifying respirator with P100 particulate filters
- HVAC Shop
  - North 7600-8A full-face, powered air-purifying respirator with organic vapor and acid gas cartridge and P100 particulate filter
- Paint Shop
  - Moldex 8000 series half-face, air-purifying respirator with organic vapor cartridge and N95 pre-filter

Appendix B: Medical Evaluation Procedures

The medical evaluation procedure is as follows:

- EHS will provide the following information to the Physician or Licensed Health-Care Professional (PLHCP) before a recommendation is made concerning an employee's ability to use a respirator:
    - The type and weight of the respirator to be used by the employee
    - The duration and frequency of respirator use
    - The expected physical work effort
    - Additional protective clothing and equipment to be worn
    - Temperature and humidity extremes that may be encountered
- EHS will provide the employee with the Respirator Medical Evaluation Questionnaire. The employee will complete the questionnaire and provide it to the PLHCP conducting the medical evaluation.
- The medical evaluation will involve the review of the medical questionnaire by the PLHCP, and may include a limited physical examination, baseline laboratory testing, a pulmonary function test, a chest x-ray, and/or other medical tests as determined by the PLHCP.
- The PLHCP will provide a written recommendation regarding the employee's ability to use the respirator to EHS and the employee, and it will contain the following information:
    - Any 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.
    - The need, if any, for follow-up medical evaluations.
    - A statement that the PLHCP has provided the employee with a copy of the written recommendation.
- EHS will maintain the written recommendation as part of the recordkeeping requirements.

Appendix C-1: Respiratory Fit Test and Seal Check Procedures

Scheduling Annual Fit Test:

1. **Complete Medical Clearance Forms:** Once the annual training has been assigned, EHS will contact your supervisor and provide a blank OHC Registration Form and Medical Questionnaire for Respiratory Clearance. *Please complete these forms and email them to* Leah.Gibbs@pennmedicine.upenn.edu.

    - Forms can also be found on the EHS Webpage under Respiratory Protection.
    - If you have not been provided a respirator, please ask your supervisor contact EHS.

2. **Schedule your appointment with the Occupational Health Center** after submitting your completed forms.

    - Please be sure to inform them that you are a West Chester University employee.
    - There is no cost to employees for this fit test.

Occupational Health Center

915 Old Fern Hill Road

Building A, Suite 3

West Chester, PA 19380

610-738-2450

3. **Medical Clearance Notification:** The Occupational Health Center will notify EHS once an employee has been cleared to wear a respirator.

Important Reminders:

- Please note that employees must receive medical clearance before scheduling a respirator fit test.
- If you have been issued a respirator, please bring it with you to your fit test appointment.
- If you have any questions, please contact EHS.

Qualitative Fit-Test Procedure

Qualitative fit-tests are pass/fail test methods that use the wearer's reaction to an irritant or their sense of taste or smell, to detect leakage into the respirator facepiece. There are four qualitative fit-test methods:

- Stannic oxychloride (irritant smoke), which causes involuntary coughing
- Isoamyl acetate, which smells like bananas
- Saccharin, which leaves a sweet taste in your mouth
- Bitrex, which leaves a bitter taste in your mouth

EHS typically uses irritant smoke for qualitative fit-tests. Respirators must be fitted with P100 filters for irritant smoke fit-tests, and when half-face respirators are being fit-tested, contact lenses should be removed. The procedure is as follows:

- The tester provides an explanation of the test procedure.
- After donning the respirator, the wearer conducts negative and positive pressure seal checks:
    - Negative pressure seal check: The wearer places palm(s) over the cartridges and inhale. The respirator should collapse slightly on the wearer's face.
    - Positive pressure seal check: The wearer places palm over the exhalation port and exhales. The wearer should feel a slight positive pressure inside the facepiece.
    - If the wearer detects leakage, the head straps should be adjusted, and the seal checks repeated.
    - The wearer should inform the tester if the adjustments cause discomfort. If a proper seal cannot be established, or it causes discomfort, a different model and/or size should be tried.
- The wearer performs the following exercises for 60 seconds each while the tester challenges the respirator with irritant smoke:
    - Normal breathing. In a normal standing position, without talking, the wearer shall breathe normally.
    - Deep breathing. In a normal standing position, the wearer shall breathe slowly and deeply, taking caution so as not to hyperventilate.
    - Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.
    - Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).
    - Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.
        - *Rainbow Passage:* ***When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.***
    - Grimace. The test subject shall grimace by smiling or frowning. (This is conducted for 30 seconds.)
    - Bending over. The test subject shall bend at the waist as if he/she were to touch his/her toes.
    - Normal breathing. Same as above.

Qualitative Respirator Fit Test Form

Name: _____ University ID_____

Clean shaven? Yes_____ No_____

Spectacle kit? Yes_____ No_____

Manufacturer/Model_____ Size_____

Fit-test method_____ Pass_____ Fail_____

Additional respirator(s):

Manufacturer/Model_____ Size_____

Fit-test method_____ Pass_____ Fail_____

Tester signature_____ Date_____

Employee signature_____ Date_____

Appendix D: Respirator Cleaning and Disinfecting Procedures

- Clean and disinfect respirators at the following intervals:
  - Respirators issued for the exclusive use of an employee shall be cleaned and disinfected as often as necessary to be maintained in a sanitary condition
  - Respirators issued to more than one employee shall be cleaned and disinfected before being worn by different individuals
  - Respirators being maintained for emergency use shall be cleaned and disinfected after each use
  - Respirators used in fit testing and training shall be cleaned and disinfected after each use
- Clean and disinfect respirators using the following procedure:
  - Remove filters, cartridges, or canisters. Disassemble face pieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Repair or replace any defective parts.
  - Wash components in warm water (less than110 degrees F/43 degrees C) with a mild detergent or a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
  - Rinse components thoroughly in clean, running warm water.
  - If the cleaning agent used does not contain a disinfecting agent, immerse respirator components for two minutes in one of the following:
  - Hypochlorite solution made by adding approximately one milliliter of laundry bleach to one liter of water at the above temperatures
  - Other disinfectant recommended by the respirator manufacturer
  - Rinse components thoroughly in clean, warm, running water. Thorough rinsing is important to prevent deterioration or corrosion of respirator parts and irritation of the wearer's face.
  - Hand dry respirator components with a clean lint-free cloth or allow the components to air-dry in a clean environment.
  - Reassemble face piece, replacing filters, cartridges, and canisters where necessary.
  - Test the respirator to ensure that all components work properly.

Appendix E: Voluntary Respirator Use Form

Information for employees who voluntarily use respirators from OSHA Appendix D to Sec. 1910.134.

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:

Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator's limitations.

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.

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.

Keep track of your respirator so that you do not mistakenly use someone else's respirator.

Employee Signature_____ Date_____

Program Administrator_____ Date_____