Respiratory Protection Program
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RESPIRATORY PROTECTION PROGRAM

I. PURPOSE

The University of Washington’s Respiratory Protection Program (RPP) exists to support the protection of employees and students from exposure to respiratory hazards, to ensure compliance with applicable occupational safety and health standards, and to provide requirements for the proper selection and use of respiratory protection equipment. When respirators are used as specified, they can prevent injury and illnesses from both acute and chronic exposures to hazardous substances.

The RPP conforms to the Washington Administrative Code (WAC) standards for Airborne Contaminants 296-841 and Respirators 296-842.

At the University of Washington (UW), respirator use is considered an interim measure until engineering and administrative controls such as ventilation or substitution of a less toxic material can be implemented. However, when such controls are not feasible or are not able to completely control the identified hazards, respirators and other protective equipment must be used. Respirators are also used voluntarily where appropriate and in accordance with WAC 296-842. Respirators are also utilized for protection during emergency situations.

II. SCOPE

The RPP applies to all University-affiliated activities where employees and/or students may use respiratory protection. This includes all locations that serve as assigned workplaces and educational settings for University faculty and staff, including the University of Washington Medical Center, Harborview Medical Center, the Seattle, Bothell and Tacoma campuses, as well as all other University owned property, University leased space, temporary field locations, and field trips that are under the control of University operations and staff. Non-UW employees (e.g., volunteers and visiting researchers) must comply with RPP requirements when working in a UW facility where respiratory protection is required.

Respiratory protection includes disposable filtering facepiece respirators, half-face and full-face air-purifying respirators (APR), powered air-purifying respirators (PAPR), supplied-air respirators (SAR), escape respirators, and self-contained breathing apparatuses (SCBA).
III. ROLES AND RESPONSIBILITIES

A. Environmental Health and Safety (EH&S)

1. Establish and maintain the University’s Respiratory Protection Program.
2. Assist organizations and departments in following the RPP.
3. Designate the Respirator Program Administrator with institutional authority for oversight of the RPP.
4. Review completed Respirator Request Forms (Appendix A) submitted by supervisors. This completed form serves as the respiratory hazard evaluation, and is updated annually.
5. Conduct workplace assessments to identify hazards and recommend controls, including respirators.
6. Determine if respirator use is required or voluntary based on a hazard assessment and select appropriate respirators.
7. Determine and document respirator cartridge change-out schedules. Provide and review the schedule with supervisors and respirator users during training.
8. Monitor respirator use to ensure that respirators are used in accordance with their certifications.
9. Provide respirator training and fit testing.
10. Oversee the respirator medical evaluation process as provided by Employee Health.
11. Monitor compliance of respirator users, involved supervisors and departments, and affiliated medical centers.

B. EH&S Respirator Program Administrator

1. Develop the written RPP. Maintain a current copy of the written program and ensure that it complies with the Washington Administrative Code (WAC) requirements.
2. Consult with respirator users, supervisors, and organizational respirator coordinators on issues related to the Respiratory Protection Program.
3. Inform organizations of product recalls, changes in respiratory protection equipment specifications, and changes in regulations.
4. Coordinate with the Employee Health Center staff to implement the medical surveillance program requirements for respirator use.
5. Maintain Program records including respiratory hazard assessments, medical evaluations, training, and fit testing records as required in records section.
6. Maintain Respirator Database.
7. Conduct an annual evaluation of the Program and implement Program improvements.
8. Evaluate the affiliated self-administrated respirator programs annually for compliance and efficacy (e.g., University of Washington Medical Center (UWMC) and Harborview Medical Center (HMC)).
9. Monitor compliance and inform supervisors or departments of improvements required for their respirator programs.

C. University Departments

University Organizations, Departments, and/or other organizational entity, in consultation with EH&S, are responsible for identifying potential respiratory hazards associated with various work processes or tasks. The supervisor or director of each organizational unit is responsible for ensuring the implementation of the Respirator Program in their unit. This includes ensuring employees wear respirators when required, maintain respirators in good working order, and train and fit test their employees at least annually. Departments are responsible for the costs associated with respirator use when respirators are required. This includes all required equipment and supplies associated with respirator use and maintenance. Departments are also responsible for evaluating the Program in their operations at least once per year and making improvements as necessary.

D. Organizational Respirator Coordinators

Some Organizations and Departments that have a large number of respirator users may choose to self-administer their own individual Respirator Program. These programs must be in compliance with the overall UW Respiratory Protection program, and must designate an Organizational Respirator Coordinator to facilitate implementation of the Respiratory Protection Program within their department. The Respirator Program Administrator will work with these departments to develop a list of specific duties for the Organizational Respirator Coordinator and to provide additional training. Such duties may include control of purchasing, distributing and maintaining respiratory protection equipment.

E. Supervisors

1. Identify, with assistance from EH&S, employees who may need respirators, facilitate medical evaluations, and schedule training and fit testing before respirator use and annually thereafter.
2. Submit a Respirator Request Form to EH&S, when respiratory hazards are first identified, when processes change that may impact respiratory hazards, and annually thereafter.
3. Request assistance from EH&S in evaluating operations that may present health and safety hazards requiring the use of a respirator.
4. Purchase and maintain availability of appropriate respirators, replacement parts, cleaning and maintenance supplies, and accessories.
5. Ensure that respirators are properly used and maintained, including cartridge change-out schedules, as necessary.
6. Implement engineering and other controls when feasible.
7. Notify EH&S if problems occur with respirator use or with the Respiratory Protection Program. Engage EH&S for further evaluation if hazards have changed.
8. Allow for employee medical clearance, training, and fit testing to be completed during paid work time.
9. Ensure you adhere to medical restrictions and conditions specified in an individual’s respirator medical clearance authorization.
10. Ensure only trained and authorized employees perform work that requires respiratory protection.

F. Respirator Users

1. Use only the brand, model, and size of respirator(s) as was trained and fitted for.
2. Use the respirator only for the specific tasks that it was issued for.
3. Use respirators for tasks where they are required.
4. Seek medical help if wearing a respirator creates negative health effects such as difficulty breathing, dizziness, or anxiety.
5. Care for and maintain respirators as instructed, including following the specific cartridge change-out schedule.
6. Notify the supervisor of any problems associated with using a respirator. This includes a respiratory hazard that needs further evaluation, if the respirator is not providing adequate protection, and any concerns with the Program.
7. Update respirator authorization by completing annual training and fit-testing (recertification).

G. EH&S Employee Health Center(s)

The Employee Health Centers are overseen by a licensed health care provider (LHCP), and are responsible for evaluating respirator users to ensure they are medically able to wear a respirator in accordance with WAC 296-842-14005 and 296-842-22005. Specifically, the Employee Health Centers are responsible to:

1. Review the Respirator Request Form and the Respirator Medical Evaluation Questionnaire (example given in Appendix D) to determine the employee’s ability to wear a respirator for the stated hazards and activities.
2. Follow up with respirator users as necessary to clarify responses on the Respirator Medical Evaluation Questionnaire and refer respirator users to the LHCP as needed for physical examinations, tests or consultation.
3. Complete the Respirator Medical Clearance Report and provide a copy to the respirator user and their supervisor. Submit reports of medical clearance results to the Respirator Program Administrator or designated associate.
4. Maintain confidential records related to health screening, medical evaluations, and health surveillance. Retain records in accordance with applicable regulations.
5. Communicate medical surveillance program issues to the Respirator Program Administrator.

The Employee Health Centers affiliated with both HMC and UWMC are responsible for the medical clearance processes for their respective institutions, as well as for the local administration of their respirator program. See Organizational Respirator Coordinator above, as well as each institution’s written RPP.

IV. VOLUNTARY USE OF RESPIRATORS

The voluntary use of respirators applies only when it has been determined that

- Such respirator use will not in itself create a hazard.
- Airborne occupational exposures to hazardous chemicals do not exceed established WISHA Permissible Exposure Limit (PEL).
- No airborne biological hazard is present.
- No specification standards require the mandatory use of respirators.

Employees who voluntarily use a disposable filtering facepiece respirator (i.e., dust-mask style respirator) are excluded from medical clearance, training and fit-testing requirements. The information in Appendix B, Important Information about Voluntary Use of Respirators, must be provided to all voluntary users of respirators for their review. In addition, the information provided in Appendix K, Respirators in the Animal Care and Use Environment, provides guidance for using respirators voluntarily for protection against Laboratory Animal Allergens (LAA).

Any employee who experiences any difficulties while wearing the filtering facepiece respirator must immediately inform their supervisor. If an employee requests to wear a respirator other than a filtering facepiece respirator, they must contact their supervisor. The supervisor must contact EH&S to initiate the appropriate respirator program procedures that include medical evaluations, training and fit testing, as required by WAC 296-842.

Voluntary use does not require the employing unit to pay for respirator equipment, but program costs, such as medical evaluations, training and fit testing, are the responsibility of the employing unit.

V. RESPIRATOR SELECTION

A. Selection Procedures

Supervisors first must identify respiratory hazards, which may include assistance from an EH&S Industrial Hygienist. This hazard evaluation should include the availability and applicability of any non-Personal Protective Equipment (PPE)
controls. While engineering controls are being implemented, or where they are not feasible, respirators shall be selected based on:

1. **Type of hazard**: respiratory hazards include, but are not limited to, gases, vapors, dusts, mists, fumes, oxygen deficient atmospheres, biohazards, infectious agents, animal allergens, radiological materials, pesticides and emergency conditions.

2. **Expected or actual exposure concentrations**, compared to the **Permissible Exposure Limits (PELs)** as listed in WAC 296-842, Respiratory Hazards. Note that not all respiratory hazards will have an applicable PEL.

3. **Potential for Immediately Dangerous to Life and Health (IDLH) atmospheres**.

4. **Infection control risk assessment**.

5. **Respirator selection guidance**, including the **Assigned Protection Factor (APF)** for various types of respirators and industry guidelines for respirator use, such as the NIOSH Respirator Selection Logic.

6. **User and workplace factors**, such as temperature extremes, humidity and other hazards that may require specific respirator types.

7. **Biosafety risk assessment**, including determination of the appropriate biosafety levels for laboratories.

8. **NIOSH Certification**: all respirators used by employees shall be NIOSH certified. All filters, cartridges and canisters must be labeled with the appropriate NIOSH approval label.

**B. Selected Respirators for Respiratory Hazards**

Respirators used at the University of Washington may include disposable filtering facepiece respirators, half-face and full-face air-purifying respirators (APR), powered air-purifying respirators (PAPR), supplied-air respirators (SAR), escape respirators, and self-contained breathing apparatus (SCBA). Appendix C lists respirators for various respiratory hazards identified at the UW.

**C. Obtaining Authorization to Wear a Respirator**

The process for obtaining authorization to wear a respirator is as follows:

1. The supervisor initiates the process by submitting a **Respirator Request Form** to EH&S via email, fax or campus mail:

   EH&S Research & Occupational Safety
   Health Sciences Building Box 357165
   1959 NE Pacific Street T-277 / Seattle, WA 98195-7165
   Fax 206.221.3068 / uwresp@uw.edu
2. EH&S consults with the supervisor and conducts a workplace hazard assessment and selects the appropriate respirator for the identified respiratory hazard(s). Results of the assessment are recorded and provided to the supervisor and the Employee Health Center.

3. Employees designated as respirator users complete and submit the confidential Respirator Medical Evaluation Questionnaire to Employee Health.

4. Employee Health Center performs and documents the respirator medical evaluation and sends a report to the employee and EH&S.

5. EH&S provides training and fit testing, and issues written documentation to employees (card, badge sticker or summary report), documenting type of respirator (make, model, size) and cartridges (as necessary), and date of fit testing. EH&S may also create a cartridge change-out schedule if needed. The employee is then authorized to wear a respirator.

6. EH&S maintains records, as required.

VI. MEDICAL EVALUATION

All potential respirator users must be medically evaluated prior to being trained, fit tested, and issued a respirator.

A. Medical Evaluation Questionnaire

Employees assigned to tasks requiring the use of respirators will complete a Respirator Medical Evaluation Questionnaire (Appendix D). EH&S provides blank medical questionnaires to supervisors, who distribute the questionnaires to employees. Employees complete and seal questionnaires in envelopes labeled “CONFIDENTIAL” and mail to the Employee Health Center (Hall Health Building, Box 354400, 4060 E. Stevens Way NE, Suite G07 Seattle, WA 98195). They can also fill out and submit the form electronically (emphlth@uw.edu). Only the Employee Health Center will review completed questionnaires. The questionnaire will be administered confidentially and during normal working hours at a location that is convenient to employees without any expenses incurred by the employee.

Employees who are renewing their respirator use authorization from a previous year will complete a “Health Status Update” during their annual training and fit testing; they have the option to update their medical clearance with Employee Health at this time as well.

UWMC and HMC may complete their medical evaluation process as documented in their respective written RPPs.
B. Employee Health Center Evaluation

Based on the hazard assessment and referral from EH&S, the Employee Health Center screens the medical questionnaire and refers employees for clinic visits if needed. Medical screening, following the requirements of WAC 296-842-14005, determines if the employee is medically qualified to use a respirator. All information obtained will remain confidential between the employee and the Employee Health Center. Employee medical evaluations may be discontinued when an employee is no longer required to use a respirator.

Medical evaluations will be repeated if the employee reports health problems related to respirator use; medical symptoms are observed during fit testing, use, or evaluation; and/or changes in the work environment result in an increase in the physiological burden placed on the employee.

The Employee Health Center will also determine if certain restrictions are necessary based on the frequency and duration of use, working conditions, exertion required, temperature and humidity extremes, and whether the user is at risk of injury. Some restrictions may be in the scope of the Americans with Disabilities Act (ADA). Employee Health Center will work with the department supervisor, the University's Disability Services Office, and/or an occupational physician as needed to determine if accommodations are required and can be put in place. Reasonable attempts will be made to accommodate restricted users in accordance with University ADA policy found at www.washington.edu/admin/dso/policy.html

If an employee opts to be medically evaluated by their personal health care provider, they do so at their own expense and are responsible for ensuring all of the appropriate medical information is provided to the University’s Employee Health Center.

Employee medical information is not shared with supervisors. All medical information is seen only by the Employee Health Center and pertinent offices as needed such as the Disabilities Services Office or Human Resources Operations. Medical information will be maintained in a confidential medical file.

C. Medical Clearance to Wear a Respirator

The Employee Health Center will provide a written recommendation as established by WAC 296-842-14005 documenting that the employee is medically qualified to wear a respirator and if there are any restrictions for respirator use. This information will be included on a Respirator Medical Clearance Report from the Employee Health Center. There is no confidential health information included on this report.
The employee and their supervisor will receive a copy of the Medical Clearance Report directly from the Employee Health Center. The supervisor is responsible for ensuring that any listed restrictions are adhered to.

VII. TRAINING

EH&S will provide training to respirator users, supervisors, organizational respirator coordinators, and those who maintain respiratory protection equipment as needed.

Employees will be trained on their responsibilities and expectations prior to using a respirator. Supervisors will also be trained prior to supervising employees who wear respirators. Employees who issue or maintain respiratory protection equipment will also be trained. Retraining will occur annually and more often if EH&S or the supervisor determines that any employee has not retained or demonstrated the knowledge, understanding, or skill level required by the University’s training program.

Respiratory Protection training will cover the following elements:

- Respiratory hazards present: gases, vapors, dust, mists, etc. and the signs and symptoms of exposure.
- Why the respirator is necessary.
- How the respirator provides protection by filtration, absorption or supplied-air.
- Limitations and capabilities of the respirator.
- How improper fit, use or maintenance can make the respirator ineffective.
- How to properly inspect the respirator, put on, perform a seal check, use and remove the respirator.
- How to clean, repair, disinfect, store and/or discard the respirator.
- How to use the respirator in emergency situations, including what to do when the respirator fails.
- Medical signs and symptoms (e.g., shortness of breath, dizziness) that may limit or prevent the effective use of respirators.
- General requirements of the WAC Respirator Standard.
- Roles and responsibilities within the UW Respiratory Protection Program.
- Employees will demonstrate their understanding of the information covered in the training through hands-on exercises.

Comprehensive training will be provided where respirators are used in IDLH situations including oxygen-deficient atmospheres such as those that occur in rescue or confined space operations.

VIII. FIT TESTING

A. General

Fit testing will be performed:
• After initial respirator medical clearance and training.
• Prior to being allowed to wear any tight-fitting facepiece respirator.
• Whenever a different respirator facepiece is to be used.
• When there are changes in employee’s physical condition that could affect respirator fit (for example, change in body weight, facial scarring, etc.).
• At least annually thereafter.

EH&S ensures that all staff using negative or positive pressure tight-fitting facepiece respirators are provided an appropriate quantitative (QNFT) or qualitative (QLFT) fit test.

*Fit Testing Procedures* (Appendix E) provides procedures for selecting respirators for fit testing, and performing quantitative and qualitative fit testing. All fit testing procedures used are to be compliant with WAC 296-842-22010. PAPRS with loose-fitting head covers/hoods that are not made to be fit tested. For these respirators, a fit test will be replaced with a hands-on competency demonstration of respirator use.

If the employee exhibits breathing difficulty or any other negative health effects during the fit test or hands-on demonstration, the test will be discontinued and the employee will be referred immediately to the Employee Health Center for further evaluation.

**B. Quantitative Fit Testing**

Quantitative fit testing using a PortaCount® Respirator Fit Tester is the preferred method for fit testing at the University of Washington. Where airborne concentrations will exceed 10X the PEL, quantitative fit testing (QNFT) is required for all negative pressure respirators.

Fit-testing of tight-fitting airline respirators and SCBA respirators will be conducted using an identical negative pressure air purifying respirator facepiece as a “substitute” test mask. Fit-testing is not done for PAPRs with loose fitting head covers/hoods.

**C. Qualitative Fit Testing**

The preferred qualitative fit-test procedure is the *Bitrex method* (Appendix E).

**D. Respirator Authorization**

After fit testing, employees will receive written documentation (card, badge sticker, and/or summary report to supervisor) with the brand, model, type, and size respirator that they are authorized to wear and the date of fit testing.
EH&S will document respirator training including the type, model, and size of respirator for which each employee has been trained and fit tested. The information is documented on the Respirator Training Registration Record (Appendix F). The Respirator Authorization Card are also issued upon request.

IX. RESPIRATOR USE

A. General Requirements

Organizations, with assistance from EH&S, may develop department or job specific standard operating procedures (SOPs) for using, cleaning, and maintaining respirators. SOPs will include procedures for face seal checks (as applicable), inspection, cartridge change-out schedule, cleaning, disinfecting, storage and maintenance.

All cartridge-style respirator users will perform a seal check before using the respirator. See Seal Check Procedures (Appendix H).

Employees will not be allowed to wear respirators with tight-fitting facepieces if they have facial hair that interferes with the seal (e.g., beards, stubble, bangs), absence of normally worn dentures, facial features (e.g., scars, deep skin creases, prominent cheekbones), or other facial features that interfere with the facepiece seal or valve function. Jewelry or headgear that projects under the facepiece seal also is not allowed.

If corrective glasses or other personal protective equipment is worn, it cannot interfere with the seal of the facepiece to the face. If a full-face tight-fitting respirator is required for use, a spectacle kit must be provided for those who need corrective lenses. Alternately, a loose-fitting PAPR with the same Assigned Protection Factor (APF) may be provided if applicable.

Employees shall leave the area where respirators are required if any of the following occur:

- Need to replace filters or cartridges.
- When they sense, smell or taste a chemical inside the respirator.
- When they notice a change in breathing resistance.
- Need to adjust their respirator.
- Need to wash their faces or respirator.
- If they become ill.
- If they experience dizziness, nausea, weakness, breathing difficulty, coughing, sneezing vomiting, fever or chills.
B. Emergency Use Respirators

It is not the University’s normal practice to have employees routinely perform operations that involve emergency and rescue work. Emergency situations are any occurrences such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment that may or does result in an uncontrolled substantial release of an airborne contaminant. This also includes emergency response duties, such as those performed by the UW Police Department, and the Pre-Entry Assessment Team (PEAT) and the Re-Entry Assessment Team (RAT) response groups. Departments will develop specific SOPs, including respirator selection, inspection, use and maintenance, for all anticipated emergency and rescue operations.

Respirators used for rescue purposes must be appropriate for Immediately Dangerous to Life or Health (IDLH) atmospheres. All potential rescuers must receive the appropriate training. If there is a respirator malfunction, the employee must immediately leave the area. Departments conducting rescue operations shall develop written SOPs to guide respirator users in correct procedures for use, inspection and rescue management.

The supervisor is responsible to ensure that emergency use respirators are accessible to the work area. Such respirators will be stored in clearly marked containers and stored according to specific manufacturer instructions. The supervisor or Organizational Respirator Coordinator will ensure that an adequate number of respirators are provided in each work area where they are needed.

C. Immediately Dangerous to Life and Health (IDLH) Use

For atmospheres that are immediately dangerous to life and health (IDLH), the highest level of respiratory protection and reliability is required. Full facepiece pressure demand SCBA certified by NIOSH for a minimum service life of thirty minutes, or a combination full facepiece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply are approved for use in IDLH atmospheres. No employee is allowed to enter an IDLH atmosphere without an appropriately trained rescue team standing by.

Respirators provided for escape only from IDLH atmospheres must be NIOSH certified for escape from the atmosphere in which they will be used.

D. N95 Respirator Use – Supply and Use Considerations During a Pandemic Event

In dire circumstances, when the supply of respiratory protection equipment is limited, management may implement additional strategies to reduce exposure to
infectious agents. These strategies will be in conformance with Centers for Disease Control (CDC) recommendations and guidelines.

E. Respirator Use for Radioactive Material Exposure

All respirators selected for use to limit the intake of radioactive material shall comply with WAC 246-221-117, 'Use of individual respiratory protection equipment', within the state Radiation Protection Standards.

X. RESPIRATOR MAINTENANCE AND CARTRIDGE CHANGE-OUT SCHEDULES

EH&S will monitor the compliance of departmental respirator maintenance and care to ensure that organizational units using respirators have designated a person to maintain and care for their respirators. The designated individual will be responsible for ensuring that the respirators remain serviceable and deliver effective protection by following the Respirator Cleaning Procedure (Appendix I).

A. Cleaning, Disinfecting and Disposal

Respirators that are issued for the exclusive use of an employee will be cleaned and disinfected as often as necessary to be maintained in a sanitary condition. Respirators used by more than one employee will be cleaned and disinfected prior to being used by a different individual. Respirators maintained for emergency use as well as respirators used in fit testing and training will be cleaned and disinfected after each use. Disposable filtering facepiece respirators will be discarded after each use according to infection control and applicable hazardous waste regulations.

B. Storage

Respirators must be stored so that they are protected against damage, contamination, dust, sunlight, temperature extremes, excessive moisture, and damaging chemicals. When respirators are packed or stored, the facepiece and parts will be stored in a manner that prevents deformation.

C. Inspections

Each respirator user must inspect their respirator(s) prior to each use. Inspections shall include a check of respirator function, tightness of connections, and the condition of various parts including but not limited to the facepiece, head straps, valves, connecting tube, cartridges/canisters/filters, and batteries. In addition, the elastomeric parts must be evaluated for pliability and signs of deterioration.
Regulators and warning devices on SCBAs must be inspected monthly to ensure that they function properly. The monthly inspection will also make sure that cylinders are in a fully charged capacity (i.e., 90% of the manufacturer’s recommended pressure level).

Respirators that are maintained for use in emergencies will be certified by documenting the date that the inspection was performed, the name or signature of the inspector, the findings of the inspection, any required corrective action, and a serial number or other means of identifying the inspected respirator. This information will be provided on the tag/label that is attached to the storage compartment for the respirator. Inspection information for emergency respirators will be maintained in the immediate work area until it is replaced following subsequent certification.

Respirators should be inspected on the frequencies below:

<table>
<thead>
<tr>
<th>Respirator</th>
<th>Frequency of Inspection</th>
</tr>
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<tbody>
<tr>
<td>Used for non-emergencies, including daily or infrequent use.</td>
<td>Before use and during cleaning.</td>
</tr>
<tr>
<td>A SCBA in any use.</td>
<td>Before use and during cleaning or monthly if not used.</td>
</tr>
<tr>
<td>Used for escape-only purposes.</td>
<td>Before carrying into a workplace for use.</td>
</tr>
<tr>
<td>Used only for emergencies.</td>
<td>Check for proper function before and after each use and at least monthly as instructed by the manufacturer.</td>
</tr>
</tbody>
</table>

D. Repairs

The supervisor will ensure that respirators which fail to pass inspection or are otherwise found to be defective will be removed from service and repaired or adjusted properly. If a respirator cannot be repaired or adjusted it will be discarded.

Only NIOSH-approved replacement parts designed for that respirator will be used. Repairs will be made in accordance with the manufacturer’s recommendations and specifications regarding the type and extent of repairs to be performed. Departments should consult with EH&S prior to making repairs.

Because SCBA components such as valves, regulators, and alarms are complex and essential to the safe functioning of SCBAs, they are required to be adjusted.
and repaired only by the manufacturer or a technician trained by the manufacturer.

SCBA air and oxygen cylinders will be maintained in a fully charged state and recharged when the pressure falls to 90% of the manufacturer's recommended pressure level. Cylinders will be recharged by sending them to the manufacturer's recommended service center or with a well-maintained and certified compressor filling system. SCBA air and oxygen cylinders will be hydrostatically tested according to the manufacturers recommended frequency. All composite-wrapped aluminum cylinders must be taken out of service after 15 years regardless of the last hydrostatic test date. Hydrostatic testing will be conducted by the manufacturer's recommended service provider.

E. Cartridge Change-Out Schedules

For air-purifying respirators with vapor and/or gas cartridges, the two systems relied upon to protect respirator wearers of contaminant breakthrough include using respirator cartridges equipped with an end-of-service life indicator (ESLI) or using a cartridge replacement schedule based on manufacturer breakthrough test data.

If the respirator has an ESLI, the user will change the cartridges when the indicator indicates that the cartridge is used up. If the cartridge does not have an ESLI, they will be changed in accordance with the replacement schedule determined by the EH&S industrial hygienist. This cartridge change out schedule is documented in the industrial hygiene assessment section of the Respirator Request Form. The change out schedule and results of the industrial hygiene assessment are reviewed with and provided to the supervisor. The information is presented to employees during training.

The supervisor is responsible for informing all affected employees of the contaminant breakthrough warning systems and the cartridge change schedules for the respirators used. If the work changes from the original conditions for which the respirator was assigned, the supervisor will ensure that employees leave the area until it is assured that they are equipped with the appropriate respiratory protection.

If an employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of the respirator facepiece, the employee must leave the work area and immediately report this to the supervisor. The cartridge and/or respirator must be replaced or repaired before allowing the employee to return to the work area.

Respirator cartridges or canisters that do not have an ESLI or a change out schedule assigned cannot be used. Either an airline respirator or self-contained breathing apparatus (SCBA) must be used.
For respirators worn exclusively for protection against particles, all particulate filters will be changed per manufacturers’ specifications or whenever the cartridge becomes hard to breathe through, is damaged or gets wet.
F. Sharing Respiratory Protection

It may be possible to share certain pieces of designated respiratory protection, such as PAPR blower assemblies or SCBA tanks and regulators. All efforts should be made to provide individual respirator users their own designated facepieces. If this is not possible, adequate cleaning and disinfection materials and protocols should be in place. Shared facepieces must be decontaminated prior to use by another individual.

XI. PROCEDURES FOR SAFE AIR QUALITY FOR SUPPLIED-AIR RESPIRATORS

A. Designated Person

Organizations that use atmosphere-supplying respirators will develop a standard operating procedure for their safe use and operation, including air cylinder maintenance. The organization will designate an individual to be responsible for ensuring the breathing air is of high purity, meets quality levels for content, and does not exceed certain contaminant levels and moisture requirements.

The designated person is responsible for maintaining the air filtration panels and air compressors in accordance with manufacturer specifications. Maintenance includes calibrating carbon monoxide monitors daily and changing filters as recommended by the manufacturer.

The designated person will also ensure that compressed air; compressed oxygen, liquid air, and liquid oxygen used for respiration meet the requirements for medical or breathing oxygen and requirements for Grade D breathing air as described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989 and as specified below as per WAC 296-842-20005:

- Oxygen (volume/volume) within 19.5 – 23.5%.
- Hydrocarbon (condensed): no more than 5 milligrams per cubic meter of air.
- Carbon monoxide (CO): No more than 10 parts per million (ppm).
- Carbon dioxide (CO2): No more than 1,000 ppm.
- No noticeable odor.

For supplied-air respirators (SARs), only Grade D breathing air shall be used in cylinders. The designated person will be responsible for ensuring this and require certification that the air in the cylinders meets the specifications of Grade D breathing air. Moisture content in the cylinders will not exceed a dew point of – 50° F (-45.6° C) at 1 atmosphere pressure.

Note: This moisture-content requirement will prevent respirator valves from freezing, which can occur when excess moisture accumulates on the valves.
All breathing gas containers must be marked in accordance with the NIOSH respirator certification standard, 42 CFR Part 84.

B. Compressors

If an oil-lubricated air compressor is used to supply breathing air it must have a carbon monoxide or high temperature alarm, or both, to monitor carbon monoxide levels.

Compressors used for supplying breathing air must be constructed and situated so contaminated air cannot enter the air-supply system. The location of the air intake will be in an uncontaminated area where exhaust gases from nearby vehicles, the internal combustion engine that is powering the compressor itself (if applicable), or other exhaust contaminants being ventilated will not be picked up by the compressor air intake.

Compressors will be equipped with suitable in-line, air-purifying sorbent beds and filters to further ensure breathing air quality and to minimize moisture content so that the dew point at 1 atmosphere pressure is 10°F (5.56°C) below the ambient temperature. Sorbent beds and filters will be maintained and replaced or refurbished periodically according to the manufacturer’s recommendations. An inspection tag will be kept at the compressor indicating the most recent change date and the signature of person authorized to perform the maintenance.

The area supervisor will ensure that the compressor intake will not allow the introduction of carbon monoxide greater than 10 parts per million (ppm) into the system. This could be from sources other than the compressor such as forklifts or other gas powered equipment. Where this is not possible or feasible, it may be necessary to combine the use of a carbon monoxide alarm with a carbon monoxide sorbent bed when conditions are such that a reliable carbon monoxide-free area for air intake cannot be found.

Breathing air couplings must be incompatible with outlets for non-respirable plant air or other gas systems to prevent accidental servicing of airline respirators with non-respirable gases or oxygen. No asphyxiating substance (e.g., nitrogen) will be allowed in the breathing airlines.

XII. RECORDS

A current copy of the University of Washington’s Written Respiratory Protection Program will be available through EH&S. All written materials required to be maintained under the recordkeeping requirements of WAC 296-842 will be made available, upon request, to the employee who is subject of the records and to the director or the director’s designee of the Washington State Department of Labor and Industries.

Additional program records include results of hazard assessments, medical evaluations, fit test records, notifications of respirator problems and recall notices, annual program
reviews, on-site inspections, and program evaluation findings and resolutions. These documents may exist in either digital or hard copy form.

XIII. PROGRAM EVALUATION

The Respirator Program Administrator, affiliated organizational respirator coordinators, and supervisors will evaluate the Respiratory Protection Program in their operations at least once per year. The Respiratory Program Evaluation Checklist (Appendix J) may be used as an evaluation tool.

The Respirator Program Administrator will have ongoing dialogue with organizational respirator coordinators, supervisors to discuss any issues they may have with the Respirator Program and to correct identified deficiencies.

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APPENDICES

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Appendix B: Important Information about Voluntary Use of Respirators ......... Error! Bookmark not defined.
Appendix C: Respirator Use Guidance ...................... Error! Bookmark not defined.
Appendix D: Respirator Medical Evaluation Questionnaires ...... Error! Bookmark not defined.
Appendix E: Fit-Testing Procedures (Qualitative and Quantitative) ... Error! Bookmark not defined.
Appendix F: Respirator Fit Testing/ Training Form ...... Error! Bookmark not defined.
Appendix H: Seal Check Procedures ......................... Error! Bookmark not defined.
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# Appendix A: Respirator Request Form

## Respirator Request Form

Environmental Health & Safety Department  
University of Washington

<table>
<thead>
<tr>
<th>1. Supervisor Name</th>
<th>First:</th>
<th>Last:</th>
<th>2. Email:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Box #</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Phone</td>
<td>( )</td>
<td>-</td>
<td>5. Dept/Unit/Shop</td>
</tr>
</tbody>
</table>

### 6. Hazards / Agents/Products (attach MSDSs)

### 7. Activities / Processes

### 8. Form of Contaminants

(Choose all that apply)
- Dust
- Mist
- Smoke
- Gas
- Fume
- Spray
- Aerosol
- Vapor

### 9. Engineering Controls in Place

- Substitution by a less toxic material
- Isolation or enclosure of process or operation
- General dilution ventilation
- Local exhaust, chemical fume hoods, special ventilation systems
- Tools or equipment designed to minimize emissions
- Other (specify)

### 10. Administrative Controls in Place

- Standard Operating Procedures (Specify)
- Employee Training
- Other (specify)

### 11. Special Uses

- None
- Firefighting
- Riot Control
- Rescue
- Confined Space Entry
- Escape From a Chemical Leak
- Chemical Spill Clean-up
- Other (specify)

### 12. Physical Demands of Work

- Light, like standing
- Moderate, like walking
- Heavy, like digging
- Other (specify)

### 13. Other PPE or Equipment

- Safety Goggles
- Face Shield
- Coveralls (Tyvek)
- Gloves
- Hard Hat
- Other (specify)

### 14. Temperature Extremes

- None
- High temperature extreme (ex. high heat furnace)
- Low temperature extreme (ex. walk-in freezer)

### 15. Frequency of Use of Respirator

- Rarely (specify)
- Occasionally (Specify)
- Daily (Specify)
## Appendix A (continued): Respirator Request Form

### 16. Respirator User Information

<table>
<thead>
<tr>
<th>First / Last</th>
<th>Completed Medical Clearance in Past 12 months?</th>
<th>EID/SID (Employee ID # or Student ID #)</th>
<th>UW Net ID (<a href="mailto:uwnetid@uw.edu">uwnetid@uw.edu</a>)</th>
<th>Job Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
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<td>25</td>
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</tr>
</tbody>
</table>

17. Supervisor Signature (may type name)  

Date

**ATTACH ADDITIONAL PAGES IF NEEDED**
Appendix A (continued): Respirator Request Form

<table>
<thead>
<tr>
<th>Environmental Health and Safety Use Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDUSTRIAL HYGIENE ASSESSMENT</td>
</tr>
</tbody>
</table>

18. Respirator(s) Selected
- [ ] Half-Face cartridge
- [ ] Full-Face cartridge
- [ ] PAPR
- [ ] SCBA
- [ ] Disposable filtering face piece: (Select) N, R, P – 95, 100
- [ ] Air-line
- [ ] Other (specify)

19. Required or Voluntary Use (attach applicable documentation)
- [ ] Required (Explain)
- [ ] Voluntary (Explain)

20. Change Out Schedule
(attach applicable documentation)
- [ ] Cartridge(s)
- [ ] 8 hours from the time the cartridges are opened
- [ ] P100, HEPA (Purple)
- [ ] Other (specify)

Activities:
- Certain organic vapors (Black)
- Certain acid gases (chlorine, sulfur dioxide, chlorine dioxide, hydrogen chloride) (White)
- Certain organic vapors and acid gases (Yellow)
- Multi-contaminant (certain organic vapors, certain acid gases, hydrogen sulfide, ammonia, methyamine, formaldehyde, hydrogen fluoride) (Olive)
- Other (specify)

Activities:
- Certain organic vapors (Purple/Black)
- Certain acid gases (Purple/White)
- Certain organic vapors and acid gases (Purple/Yellow)
- Multi-contaminant (Purple/Olive)
- Other (specify)

Activities:
- Certain acid gases (White)
- Multi-contaminant (Olive)
- Other (specify)

Activities:
- Disposable filtering face piece: (Select) N, R, P – 95, 100
- Other (specify)

Activities:
- Cartridge

21. Reviewed Assessment with Supervisor (required)
- [ ]

22. Industrial Hygienist Signature

Date

Send completed form to UW Respirator Program Administrator: mailto:UWresp@uw.edu
Phone: 206-543-7398, Fax: 206.221.3968, Box 357165

June 2011

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Appendix B: Important Information about Voluntary Use of Respirators

<table>
<thead>
<tr>
<th>Advisory Information for Employees Who Voluntarily Use Disposable Filtering Facepiece Respirators</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Respirators protect against airborne hazards when properly selected and used. Respirator usage that is required by WSHA or your employer is not voluntary use. With required use, your employer will need to provide further training and meet additional requirements in this chapter. WSHA recommends voluntary use of respirators when exposure to substances is below WSHA permissible exposure limits (PELs) because respirators can provide you an additional level of comfort and protection.</td>
</tr>
<tr>
<td>• If you choose to voluntarily use a respirator (whether it's provided by you or your employer) be aware that respirators can create hazards for you, the user. You can avoid these hazards if you know how to use your respirator properly and how to keep it clean. Take these steps:</td>
</tr>
<tr>
<td>- Read and follow all instructions provided by the manufacturer about use, maintenance (cleaning and care), and warnings regarding the respirator’s limitations.</td>
</tr>
<tr>
<td>- Choose respirators that have been certified for use to protect against the substance of concern. The National Institute for Occupational Safety and Health (NIOSH) certifies respirators. If a respirator isn't certified by NIOSH, you have no guarantee that it meets minimum design and performance standards for workplace use.</td>
</tr>
<tr>
<td>- A NIOSH approval label will appear on or in the respirator packaging. It will tell you what protection the respirator provides.</td>
</tr>
<tr>
<td>- Keep track of your respirator so you don’t mistakenly use someone else’s.</td>
</tr>
<tr>
<td>- Do not wear your respirator into:</td>
</tr>
<tr>
<td>• Atmospheres containing hazards that your respirator isn’t designed to protect against.</td>
</tr>
<tr>
<td>For example, a respirator designed to filter dust particles won’t protect you against solvent vapor, smoke, or oxygen deficiency.</td>
</tr>
<tr>
<td>• Situations where respirator use is required.</td>
</tr>
</tbody>
</table>

Reference: WAC 296-842-11005

By signing this form, I verify that I have read and understand the information provided.

<table>
<thead>
<tr>
<th>Employee’s Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

Voluntary Respirator Use (OHS Form 405) 3/25/09

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### Appendix C: Respirator Use Guidance

#### Examples of Respirators Used at the University of Washington

<table>
<thead>
<tr>
<th>Organization/Department</th>
<th>Job Task</th>
<th>Respiratory Hazard</th>
<th>NIOSH-Approved Respirators Used</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioengineering</td>
<td>Working with solvents and nanomaterials</td>
<td>Solvents – various</td>
<td>Half-mask APR</td>
<td>Required</td>
</tr>
<tr>
<td>Biological Structure</td>
<td>Embalming</td>
<td>Formaldehyde, phenol</td>
<td>Half-mask APR, PAPR</td>
<td>Required</td>
</tr>
<tr>
<td>Comparative Medicine</td>
<td>Animal husbandry/Vet services</td>
<td>Lab Animal Allergens (LAA) Biological agents (BSL3)</td>
<td>N95 PAPR</td>
<td>Required &amp; Voluntary</td>
</tr>
<tr>
<td>Env. and Occ. Health Sciences</td>
<td>Field research</td>
<td>MPTP Pesticides</td>
<td>N95 Half Face APR</td>
<td>Required</td>
</tr>
<tr>
<td>Environmental Health and Safety</td>
<td>Site inspections, industrial hygiene sampling</td>
<td>Various (CV, Formaldehyde, dusts, silica, asbestos, acid gases)</td>
<td>half-mask APR</td>
<td>Required</td>
</tr>
<tr>
<td>Environmental Health and Safety</td>
<td>Pre-entry Assessment Team</td>
<td>Unknown</td>
<td>SCBA</td>
<td>Required</td>
</tr>
<tr>
<td>Facilities Maintenance and Construction</td>
<td>Renovation and maintenance activities</td>
<td>Various (CV, Formaldehyde, dusts, silica, asbestos, acid gases)</td>
<td>Half-mask APR, Full-face APR, PAPR, Airline</td>
<td>Required</td>
</tr>
<tr>
<td>Facilities Custodial Services</td>
<td>Custodial services</td>
<td>Various (CV, Formaldehyde, dusts, silica, asbestos, acid gases)</td>
<td>Half-mask APR</td>
<td>Required</td>
</tr>
<tr>
<td>Forest Resources</td>
<td>Research</td>
<td>Organic vapors</td>
<td>Half-mask APR</td>
<td>Required</td>
</tr>
<tr>
<td>Gnotobiotic Core</td>
<td>Research</td>
<td>Cldox vapors</td>
<td>½ mask, PAPR</td>
<td>Required</td>
</tr>
<tr>
<td>Hall Health Providers</td>
<td>Patient Care</td>
<td>Infectious agents</td>
<td>N95</td>
<td>Required</td>
</tr>
<tr>
<td>Health Sciences Administration</td>
<td>Post-earthquake building entry</td>
<td>Asbestos</td>
<td>Half-mask APR</td>
<td>Required</td>
</tr>
<tr>
<td>Health Sciences-Scientific Instruments</td>
<td>Equipment maintenance in BSL2 and BSL3 labs</td>
<td>Biological agents</td>
<td>PAPR</td>
<td>Required</td>
</tr>
<tr>
<td>HMCA/UWMC</td>
<td>Healthcare</td>
<td>Infectious agents</td>
<td>N95 or PAPR per infection control requirements</td>
<td>Required</td>
</tr>
<tr>
<td>HMC ED Decon Team, Security Services</td>
<td>Healthcare</td>
<td>Unknown CBRN and infectious agents</td>
<td>PAPR</td>
<td>Required</td>
</tr>
<tr>
<td>Prosthetics and Orthotics</td>
<td>Constructing orthotics and prosthetic devices</td>
<td>Solvents, dust</td>
<td>Half-mask APR</td>
<td>Required</td>
</tr>
<tr>
<td>Rehabilitation Medicine</td>
<td>Constructing orthotics and prosthetic devices</td>
<td>Solvents, dust</td>
<td>Half-mask APR</td>
<td>Required</td>
</tr>
<tr>
<td>School of Medicine</td>
<td>Research</td>
<td>Biological agents (BSL1, 2 and 3)</td>
<td>N95, PAPR</td>
<td>Required</td>
</tr>
<tr>
<td>School of Medicine</td>
<td>Healthcare</td>
<td>Infectious agents</td>
<td>N95, PAPR</td>
<td>Required</td>
</tr>
<tr>
<td>UWMCC ED Decon Team, Security Services</td>
<td>Contaminated patient decon</td>
<td>Unknown CBRN and infectious agents</td>
<td>PAPR</td>
<td>Required</td>
</tr>
<tr>
<td>UWMCC-Ops and Maintenance</td>
<td>Maintenance Activities</td>
<td>Various</td>
<td>Half-mask APR and PAPR</td>
<td>Required</td>
</tr>
<tr>
<td>UWPD</td>
<td>CBRN / Riot Response</td>
<td>Unknown CBRN and riot agents</td>
<td>Full-face APR</td>
<td>Required</td>
</tr>
<tr>
<td>Various</td>
<td>Animal research</td>
<td>Animal allergens</td>
<td>N95, Half-mask APR</td>
<td>Required &amp; Voluntary</td>
</tr>
<tr>
<td>Washington Nanofabrication Facility</td>
<td>Semiconductor manufacture</td>
<td>Toxic &amp; Corrosive gases</td>
<td>SCBA</td>
<td>Required</td>
</tr>
<tr>
<td>WA National Primate Center</td>
<td>Research</td>
<td>Biological agents (ABSL3)</td>
<td>PAPR</td>
<td>Infrequent</td>
</tr>
</tbody>
</table>

June 2011
## Appendix D: Respirator Medical Evaluation Questionnaires

### Confidential Medical Record

**ENVIRONMENTAL HEALTH & SAFETY**

**UNIVERSITY OF WASHINGTON**

**RESPIRATOR MEDICAL EVALUATION QUESTIONNAIRE** — for disposable/half-mask/PAPR respirator users

**PLEASE PRINT — Attach additional sheets if needed.**

For help filling this out call the employee health nurse at 206-685-1026. If you have questions about respirators call the Respirator Program Administrator at 206-543-7386.

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 supervisor must not look at or review your answers.

<table>
<thead>
<tr>
<th>Name (Last)</th>
<th>(First)</th>
<th>(MI)</th>
<th>EID/SSID</th>
<th>Today’s Date</th>
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</thead>
<tbody>
<tr>
<td>Job Title</td>
<td>Box Number</td>
<td>Dept/Shop</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervisor</td>
<td>Work phone number</td>
<td>What is the best time to reach you at this number?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Date of Birth | Sex [Male] [Female] | Height [ft] [in] | Weight |

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

- [ ] N, R, or P disposable respirator (filter-mask, non-cartridge type only)
- [ ] Other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus)

- [ ] Have you worn a respirator? If yes, what type(s)

1. [ ] Do you currently smoke tobacco, or have you smoked tobacco in the last month?

2. Have you ever had any of the following conditions?
   - [ ] Seizures (fits)
   - [ ] Diabetes (sugar disease)
   - [ ] Latex allergy or allergic reactions that interfere with your breathing
   - [ ] Claustrophobia (fear of closed-in places)
   - [ ] Trouble smelling odors

3. Have you ever had any of the following pulmonary or lung problems?
   - [ ] Asbestosis
   - [ ] Emphysema
   - [ ] Pneumonia
   - [ ] Tuberculosis
   - [ ] Silicosis
   - [ ] Lung cancer
   - [ ] Pneumoconiosis (collapsed lung)
   - [ ] Broken ribs
   - [ ] Any chest injuries or surgeries
   - [ ] Any other lung problem that you’ve been told about

4. Do you currently have any of the following symptoms of pulmonary or lung illness?
   - [ ] 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

5. Have you ever had any of the following cardiovascular or heart problems?
   - [ ] Heart attack
   - [ ] Angina
   - [ ] Swelling in your legs or feet (not caused by walking)
   - [ ] Heart failure
   - [ ] Heart arrhythmia (heart beating irregularly)
   - [ ] High blood pressure
   - [ ] Any other heart problem that you’ve been told about

6. Have you ever had any of the following cardiovascular or heart symptoms?
   - [ ] Frequent pain or tightness in your chest
   - [ ] Pain or tightness in your chest that interferes with your job
   - [ ] Pain or tightness in your chest during physical activity
   - [ ] 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 you may be related to heart or circulation problems

7. Do you currently take medication for any of the following problems?
   - [ ] Breathing or lung problems
   - [ ] Heart trouble
   - [ ] Blood pressure
   - [ ] Seizures (fits)

8. If you’ve used a respirator, have you ever had any of the following problems?
   - [ ] Eye irritation
   - [ ] Skin allergies or rashes
   - [ ] Anxiety
   - [ ] General weakness or fatigue
   - [ ] Any other problem that interferes with your use of a respirator

**Signature** ___________________________ **Date** _____________

Return this form to: Hall Health, Employee Health Nurse, Box 354410, Seattle, WA 98195-4410

Write “CONFIDENTIAL” on the envelope
## Appendix D (continued): Respirator Medical Evaluation Questionnaires

### Resperator Medical Evaluation Questionnaire

**CONFIDENTIAL MEDICAL RECORD**  
**RESPIRATOR MEDICAL EVALUATION QUESTIONNAIRE**  
ENVIRONMENTAL HEALTH & SAFETY

For help filling out call the employee health nurse at 206-685-1026. If you have questions about respirators call the Respirator Program Administrator at 206-543-7388.

**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 supervisor must not look at or review your answers.**

<table>
<thead>
<tr>
<th>Name (Last)</th>
<th>(First)</th>
<th>(M.I.)</th>
<th>EHS UID</th>
<th>Today’s Date</th>
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<tr>
<th>Job Title</th>
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<th>Supervisor</th>
<th>Work phone number</th>
<th>What is the best time to reach you at this number?</th>
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<table>
<thead>
<tr>
<th>Date of Birth</th>
<th>Sex</th>
<th>Height</th>
<th>Weight</th>
<th>Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire?</th>
</tr>
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<tbody>
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Check the type of respirator you will use (you can check more than one category):

- [ ] N, R, or P disposable respirator (filter-mask, non-cartridge type only)
- [ ] Other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus)

- [ ] Have you worn a respirator? If yes, what type(s)
- [ ] Do you currently smoke tobacco, or have you smoked tobacco in the last month?
- [ ] Have you ever had any of the following conditions?
  - [ ] Seizures (fits)
  - [ ] Diabetes (sugar disease)
  - [ ] Latex allergy or allergic reactions that interfere with your breathing
  - [ ] Claustrophobia (fear of closed-in places)
  - [ ] Trouble smelling odors

- [ ] Have you ever had any of the following pulmonary or lung problems?
  - [ ] Asbestososis
  - [ ] Emphysema
  - [ ] Silicosis
  - [ ] Chronic bronchitis
  - [ ] Pneumonia
  - [ ] Lung cancer
  - [ ] Pneumothorax (collapsed lung)
  - [ ] Broken ribs
  - [ ] Any chest injuries or surgeries
  - [ ] Any other lung problem that you’ve been told about

- [ ] Do you currently have any of the following symptoms of pulmonary or lung illness?
  - [ ] 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 that interferes with your job
  - [ ] Chest pain when you breathe deeply
  - [ ] Any other symptoms that you think may be related to lung problems

- [ ] Have you ever had any of the following cardiovascular or heart problems?
  - [ ] Heart Attack
  - [ ] Angina
  - [ ] Swelling in your legs or feet (not caused by walking)
  - [ ] Heart failure
  - [ ] Heart arrhythmia (heart beating irregularly)
  - [ ] High blood pressure
  - [ ] Any other heart problem that you’ve been told about

- [ ] Have you ever had any of the following cardiovascular or heart symptoms?
  - [ ] Frequent pain or tightness in your chest
  - [ ] Pain or tightness in your chest that interferes with your job
  - [ ] Pain or tightness in your chest during physical activity
  - [ ] In the past two years, have you noticed your heart skipping or missing a beat
  - [ ] Heart burn or indigestion that is not related to eating
  - [ ] Any other symptoms that you think may be related to heart or circulation problems

- [ ] Do you currently take medication for any of the following problems?
  - [ ] Breathing or lung problems
  - [ ] Heart trouble
  - [ ] Blood pressure
  - [ ] Seizures (fits)

- [ ] If you’ve used a respirator, have you ever had any of the following problems?
  - [ ] Eye irritation
  - [ ] Skin allergies or rashes
  - [ ] Anxiety
  - [ ] General weakness or fatigue
  - [ ] Any other problem that interferes with your use of a respirator

- [ ] Have you ever lost vision in either eye (temporarily or permanently)?
- [ ] Do you currently have any of the following vision problems?
  - [ ] Wear contact lenses
  - [ ] Color blind
  - [ ] Wear glasses
  - [ ] Any other eye or vision problem
  - [ ] Have you ever had an injury to your ears, including a broken ear drum?
  - [ ] Have you ever had a back injury?

- [ ] Difficulty hearing
- [ ] Wear a hearing aid
- [ ] Any other hearing or ear problem

---

UW Department of Environmental Health and Safety  
Written Respiratory Protection Program  
November 2017  
ehs.washington.edu  
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Appendix D (continued): Respirator Medical Evaluation Questionnaires

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
</table>
| 14. Do you currently have any of the following musculoskeletal problems? | - Weakness in any of your arms, hands, legs, or feet  
- Back pain  
- Pain or stiffness when you lean forward or backward at the waist  
- Difficulty fully moving your arms and legs  
- Difficulty fully moving your head up or down  
- Difficulty bending at the waist  
- Difficulty bending over at your knees  
- Difficulty squating to the ground  
- Difficulty climbing a flight of stairs or a ladder carrying more than 25 lbs.  
- Any other musculoskeletal problem that interferes with using a respirator |
| 15. 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? | 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? |
| 16. 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? | If yes, name the chemicals, if you know them |
| 17. Have you ever worked with any of the materials, or under any of the conditions, listed below | - Asbestos  
- Silica (e.g., in sandblasting)  
- Tobacco or cleveland (e.g., grinding or welding this material)  
- Beryllium  
- Aluminum  
- Iron  
- Tin  
- Dusty environments  
- Any other hazardous exposures |
| 18. List any second jobs or side businesses you have:  
19. List your previous occupations:  
20. List your current and previous hobbies: |
| 21. Have you been in the military services? | If yes, were you exposed to biological or chemical agents (either in training or combat) |
| 22. Have you ever worked on a HAZMAT team? |
| 23. Are you taking any other medications for any reason (including over-the-counter medications) other than medications for breathing and lung problems, heart trouble, blood pressure, and seizures mentioned earlier in this questionnaire? | If yes, name the medications, if you know them |
| 24. Will you be using any of the following items with your respirator(s)? | - N95 Filters  
- Cartridges (for example, gas masks)  
- HEPA Filters |
| 25. How often are you expected to use the respirator(s)? | - Indicate all answers that apply to you.  
- Less than 1 hour per day  
- 1 to 2 hours per day  
- 2 to 4 hours per day  
- Over 4 hours per day |
| 26. During the period you are using the respirator(s) is your work effort | - Light (less than 200 kcal per hour)  
- Moderate (200 to 350 kcal per hour)  
- Heavy (above 350 kcal per hour) |
| 27. Will you be wearing protective clothing and/or equipment (other than the respirator) when you’re using your respirator? | If yes, describe this protective clothing and/or equipment |
| 28. Will you be working under hot conditions (temperature exceeding 77 degrees F.)? | If yes, describe the work you’ll be doing while you’re using your respirator(s) |
| 29. Will you be working under humid conditions? |
| 30. Describe the work you’ll be doing while you’re using your respirator(s) |
| 31. Describe any special or hazardous conditions you might encounter when you’re using your respirator(s) (for example, confined spaces, life-threatening gases) |
| 32. 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  
- Estimate the maximum exposure level per shift  
- Duration of exposure per shift  
- Name of the second toxic substance  
- Estimate the maximum exposure level per shift  
- Duration of exposure per shift  
- Name of the third toxic substance  
- Estimate the maximum exposure level per shift  
- Duration of exposure per shift |
| Data Collection Center: | UW 1031, Rev. 10-06 REVERSE |

Signature ___________________________ Date ________________

Return this form to: Hall Health, Employee Health Nurse, Box 354410, Seattle, WA 98195-4410
Write "CONFIDENTIAL" on the envelope

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Appendix E: Portacount™ Fit Test Procedure

Important

1. This is a quantitative (QNFT) fit-test procedure.
2. This method uses a particle counting instrument that measures and compares the particle concentration both inside and outside the respirator facepiece while the employee performs a series of test exercises.
3. Particles in the ambient air are used as the test aerosol.

Set-Up

1. Obtain a test instrument such as a TSI Portacount™.
2. Have probed respirators available for each respirator model and size the employer uses, or have a sampling adapter available if the employee’s actual or chosen respirator will be tested.
   - A probed respirator has a special fitting installed on the facepiece design connect with the end of the test instrument’s plastic sampling tube so that air samples can be taken inside the facepiece. Probed respirators can be obtained from the respirator manufacturer, or distributor, and can only be used for fit testing purposes.
   - Contact TSI Inc., or the respirator’s manufacturer to obtain probed respirators or facepiece sampling adapters.
3. Follow the test instrument manufacturer’s instructions for test preparation, including particle, zero, and system checks. Make sure the instrument’s pass or fail criterion is programmed to the following minimum performance levels.
   - For half-facepiece respirators, an overall minimum fit factor of 100 as a passing level.
   - For full-facepiece respirators, an overall minimum fit factor of 500 as a passing level.
4. Have high efficiency particulate air (HEPA) filters, or other respirator filters available that are capable of preventing significant penetration by particles generated by the test instrument such as, P100 or N95 series filters.
   - If you will use a sampling adapter instead of probed respirators be sure to have the correct type for the respirators chosen.

Fit Test - Once the individual passes the sensitivity test, the actual fit test can be conducted.

1. Properly attach the sampling line to the facepiece probe or sampling adapter.
2. Have the employee attach respirator filters, put on, properly adjust, and wear the respirator 5 minutes before the fit test. During this time you and the employee must evaluate the respirator’s general fit by checking:
   - Proper chin placement
Appendix E (continued): Fit-Testing Procedures (Qualitative and Quantitative)

3. Have the employee perform a seal check. Make sure the sampling line is crimped to avoid leakage during the seal check. If no leakage is detected proceed to Step 8. If leakage is detected:
   - Determine the cause and
   - If leakage is due to a poorly fitting facepiece have the employee:
     1. Choose another respirator size or model
        and
     2. Start again at Step 6.

4. Start the fit test cycle.
   - Follow the manufacturer’s instructions for operating the test instrument.
   - Have the employee perform the appropriate fit test exercises.
   - The test instrument will automatically stop and calculate the overall fit factor. Use this result to determine whether or not the test is passed.
     1. The test has been passed if the overall fit factor is at least 100 for a half facepiece, or 500 for a full facepiece.
     2. The test has failed if the overall fit factor is below 100 for a half facepiece or 500 for a full facepiece.

Note: If the test has failed, have the employee select another respirator model or size and repeat this procedure.
Appendix E: Bitrex™ Fit Test Procedure

Important

1. This is a qualitative (QLFT) fit-test procedure.
2. Bitrex (denatonium benzoate) is routinely used as a taste aversion agent in household liquids that children should not drink and is endorsed by the American Medical Association, the National Safety Council, and the American Association of Poison Control Centers.
3. The employee must not eat, smoke, chew gum or drink anything but plain water for at least 15 minutes before the fit test.
4. Commercially-prepared solutions are preferred for qualitative fit testing at the UW.

Set-Up

1. Obtain a test enclosure that meets the following specifications:
   - At least 12 inches in diameter by 14 inches tall
   - A clear front portion
   - Enough space inside the front to allow free movement of the head when a respirator is worn
   - A ⅛ inch (or 1.9 centimeter) hole to accommodate the nebulizer nozzle. The hole must line up in front of the wearer’s nose and mouth.
2. Obtain and assemble 2 clean DeVilbiss Model 40 Inhalation Medication Nebulizers or equivalent
3. Prepare the screening solution by drawing from bottle of sensitivity solution or breaking glass inner vial of sensitivity solution tube.
4. Add about 1 ml of the screening solution to one of the nebulizers.
5. Mark this nebulizer to distinguish it from the one to be used for fit testing.
6. Prepare the fit test solution by drawing from bottle of fit test solution or breaking glass inner vial of fit test solution tube.
7. Add about 1 ml of the test solution to the second nebulizer.
8. Mark this nebulizer or station to distinguish it from the one used for screening.
9. Have particulate filters ready for the employee’s chosen respirator or have filtering facepiece respirators ready.

Note: Nebulizers must be thoroughly rinsed in water and shaken dry each morning and afternoon or at least once every four hours.

Sensitivity Test – to make sure the subject can taste the Bitrex solution

1. Have the person put on the test hood without a respirator - position the hood forward so that there is a six-inch gap between the person’s face and the hood.
2. Instruct the person to breathe through his/her mouth.
Appendix E (continued): Fit-Testing Procedures (Qualitative and Quantitative)

3. Using a nebulizer containing the sensitivity solution, spray the aerosol into the hood. Inject ten squeezes of the bulb, fully collapsing and allowing the bulb to expand fully on each squeeze.
4. Ask the person if he/she can taste the sensitivity solution.
5. If the person does not taste the sensitivity solution, spray an additional ten squeezes of the aerosol into the hood. Repeat again if needed. Do not exceed a total of thirty squeezes during the test. If thirty squeezes are inadequate, end the test and use a different type of fit test method.
6. Remove the hood and allow the subject to rinse their mouth with clear water or give them a few minutes to clear the taste from his/her mouth.

Fit Test - Once the individual passes the sensitivity test, the actual fit test can be conducted.

1. Have the person put on the test hood with a respirator - position the hood forward so that there is a six-inch gap between the person's face and the hood.
2. Using the nebulizer filled with the test solution, inject the aerosol into the hood using the same number of squeezes required during the sensitivity test (see step 6 above).
3. Instruct the person to tell you if they can taste the Bitrex at any time during the test.
4. To maintain an adequate concentration of the Bitrex aerosol during the test, spray one-half of the number of squeezes used in step 3 every thirty seconds.
5. After the initial aerosol is injected, instruct the subject to perform the following exercises for 60 seconds each:
   - Normal breathing
   - Deep breathing
   - Turning head from side to side
   - Nodding the head up and down
   - Talking, recite the alphabet or read a passage out loud (i.e. Rainbow Passage)
   - Normal breathing
6. If the entire test is completed without the person detecting the bitter taste of the Bitrex aerosol, the test is successful.
7. If the person does detect the taste of Bitrex, terminate the test. Wait fifteen minutes or have the person rinse their mouth with clear water, and perform the test over – either with a new type of respirator or after adjusting the existing respirator. The employee may also be directed to a quantitative fit test method.
Appendix F: Respirator Fit Testing/ Training Form

**RESPIRATOR TRAINING AND FIT TEST RECORD**

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<tr>
<th>Date:</th>
<th>UWNetID:</th>
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<tbody>
<tr>
<td>Last Name:</td>
<td>Employee/Student ID #:</td>
</tr>
<tr>
<td>Full First Name:</td>
<td>Dept/Shop:</td>
</tr>
<tr>
<td>Job Title:</td>
<td>Supervisor:</td>
</tr>
</tbody>
</table>

**Signature:**

**ANNUAL HEALTH STATUS UPDATE** Have you experienced any of the following within the last year? If YES, contact the UW Employee Health Center for consultation at 206-685-1026 BEFORE your fit test.

- Anxiety
- Claustrophobia
- Dizziness
- Wheezing

- Chest pain
- Facial shape changes
- Shortness of breath
- Weight gain or loss of 20 lb

Select: ☐ Yes ☐ No

Initial Here:

**FIT TEST RECORD**

<table>
<thead>
<tr>
<th>Respirator #1</th>
<th>FIT TEST RECORD – PORTACCOUNT QNFT</th>
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<tbody>
<tr>
<td>North 7700</td>
<td>Normal Breathing</td>
</tr>
<tr>
<td>North 7000</td>
<td>Deep Breathing</td>
</tr>
<tr>
<td>MSA Adv 200</td>
<td>Side-breathing</td>
</tr>
<tr>
<td>MSA 7500</td>
<td>Up-Down</td>
</tr>
<tr>
<td>MSA Millenium</td>
<td>Talking</td>
</tr>
<tr>
<td>MSA Ultra Elite</td>
<td>Grimace</td>
</tr>
<tr>
<td>3M Airmate</td>
<td>Bends</td>
</tr>
<tr>
<td>3M Breathsasy</td>
<td>Normal</td>
</tr>
<tr>
<td>3M GVP</td>
<td>OVERALL SCORE</td>
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<tr>
<td>North Compact Air</td>
<td></td>
</tr>
<tr>
<td>MaxAir</td>
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</table>

**Type**

- Disposable
- APR ½ Face
- APR Full face

**Size**

- S
- M
- MIL
- L
- Regular

**Headpiece**

- 3M: BE 12 (head cvr) BE 10 (hood) H410 (hood)
- North: Primair PA101 (head cvr)
- Primair Plus
- Other: PA111

**QLFT**

- Bitrex
- # Puffs to Taste:

**Overall Result:** PASS FAIL

Instructor/Fit Tester Signature:
### Appendix F (continued): Respirator Fit Testing/ Training Form

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<th>Respirator #2</th>
<th>FIT TEST RECORD – PORTACOUNT QNFT</th>
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<tr>
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<tr>
<td>North 7700</td>
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<tr>
<td>North 7600</td>
<td>3M 1860 Deep Breathing</td>
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<tr>
<td>MSA Adv 200</td>
<td>3M 1870+ Side Breathing</td>
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<tr>
<td>3M 7500</td>
<td>KC Tecnol Up-Down</td>
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<tr>
<td>MSA Millenium</td>
<td>3M 8210 Talking</td>
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<tr>
<td>MSA Ultra Elite</td>
<td>3M 8211 Grimace</td>
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<td>3M Airmate</td>
<td>3M 8511 Bends</td>
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<tr>
<td>3M Bretheasy</td>
<td>3M 9210+ Normal</td>
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<tr>
<td>3M GVP</td>
<td>3M 9211+ OVERALL SCORE</td>
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<td>North Compact Air</td>
<td>MaxAir Other:</td>
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<td>APR Full face</td>
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<td># Puffs to Taste:</td>
<td>Overall Result: PASS FAIL</td>
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<th>FIT TEST RECORD – PORTACOUNT QNFT</th>
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<tr>
<td>North 7700</td>
<td>3M VFlex Normal Breathing</td>
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<td>North 7600</td>
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<td>MSA Adv 200</td>
<td>3M 1870+ Side Breathing</td>
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<tr>
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<td>3M 8210 Talking</td>
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<td>MSA Ultra Elite</td>
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<td>3M Airmate</td>
<td>3M 8511 Bends</td>
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<td>3M Bretheasy</td>
<td>3M 9210+ Normal</td>
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<tr>
<td>3M GVP</td>
<td>3M 9211+ OVERALL SCORE</td>
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<tr>
<td>North Compact Air</td>
<td>MaxAir Other:</td>
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<table>
<thead>
<tr>
<th>Type</th>
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</tr>
</thead>
<tbody>
<tr>
<td>APR ½ Face</td>
<td>SCBA</td>
</tr>
<tr>
<td>APR Full face</td>
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</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>S M M/L L Regular</th>
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<thead>
<tr>
<th>QLFT</th>
<th>Bitrex</th>
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<tbody>
<tr>
<td># Puffs to Taste:</td>
<td>Overall Result: PASS FAIL</td>
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</table>

Revised 8/16

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Appendix G: Respirator Authorization Card

Appendix G: Respirator Training, Fit Testing and Authorization Record

Front:

ENVIRONMENTAL HEALTH & SAFETY
UNIVERSITY of WASHINGTON

Respirator Authorization

Name  EID/SSD

Brand  Model  Type  Size

Brand  Model  Type  Size

EH&S Signature  Fit Test Date

Annual training & fit testing required by WAC 296-842.

Back:

Remember!

- Use only brand, model & size respirator for which you were trained and fitted.
- Inspect the respirator before use.
- For tight-fit respirators, perform negative and positive pressure seal checks each time the respirator is worn.
- Contact EH&S if you are uncertain about selecting the appropriate respirator for a specific contaminant.
- Know the limits of your respirator.
- Maintain the respirator in a sanitary condition and dispose as required.
- Follow manufacturer's instructions.
- Notify your supervisor if you experience increased breathing resistance, an odor or taste, or throat irritation.

UW Environmental Health & Safety, 206-543-7388
Appendix H: Seal Check Procedure for Cartridge-Style Respirators

Important Information for Respirator Users:

- You need to conduct a seal check each time you put your respirator on before you enter the respirator use area. The purpose of a seal check is to make sure your respirator (which has been previously fit tested) is properly positioned on your face to prevent leakage during use and to detect functional problems.

- The procedure below has two parts: a positive pressure check and a negative pressure check. You must complete both parts each time. It should only take a few seconds to perform; once you learn it.

  - If you cannot pass both parts, your respirator is not functioning properly, see your supervisor for further instruction.

Positive pressure check:

1. Remove exhalation valve cover, if removable.

2. Cover the exhalation valve completely with the palm of your hand while exhaling gently to inflate the facepiece slightly.

3. The respirator facepiece should remain inflated (indicating a build-up of positive pressure and no outward leakage).

   - If you detect no leakage, replace the exhalation valve cover (if removed), and proceed to conduct the negative pressure check.
   - If you detect evidence of leakage, reposition the respirator (after removing and inspecting it), and try the positive pressure check again.

Negative pressure check:

4. Completely cover the inhalation opening(s) on the cartridges or canister with the palm(s) of your hands while inhaling gently to collapse the facepiece slightly.

   - If you cannot use the palm(s) of your hands to effectively cover the inhalation openings on cartridges or canisters, you may use:
     - Filter seal(s) (if available) OR thin rubber gloves.
5. Once the facepiece is collapsed, hold your breath for 10 seconds while keeping the inhalation openings covered.

6. The facepiece should remain slightly collapsed (indicating negative pressure and no inward leakage).
   - If you detect no evidence of leakage, the tightness of the facepiece is considered adequate, the procedure is completed, and you may now use the respirator.
   - If you detect leakage, reposition the respirator (after removing and inspecting it) and repeat both the positive and negative fit checks.
Appendix I: Respirator Cleaning Procedure

Note: Procedure authored for elastomeric respirators only.

1. Remove filters, cartridges, canisters, speaking diaphragms, demand and pressure valve assemblies, hoses, or any components recommended by the manufacturer.
   - Discard or repair any defective parts.

2. Wash components in warm (43°C [110°F] maximum) water with a mild detergent or with a cleaner recommended by the manufacturer.
   - A stiff bristle (not wire) brush may be used to help remove the dirt.
   - If the detergent or cleaner doesn’t contain a disinfecting agent, respirator components should be immersed for 2 minutes in one of the following:
     - A bleach solution (concentration of 50 parts per million of chlorine). Make this by adding approximately one milliliter of laundry bleach to one liter of water at 43°C (110°F)
     - Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer

3. Rinse components thoroughly in clean, warm (43°C [110°F] maximum), preferably, running water.
   Note: The importance of thorough rinsing can’t be overemphasized. Detergents or disinfectants that dry on facepieces could cause dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts, if not completely removed.

4. Drain components.

5. Air-dry components or hand dry components with a clean, lint-free cloth.

6. Reassemble the facepiece components.
   - Replace filters, cartridges, and canisters, if necessary (for testing)

7. Test the respirator to make sure all components work properly.
### Appendix J: Respirator Program Evaluation Checklist

#### Respirator Program Audit Checklist

**Auditors:**

**Scope of Audit (departments or institution):**

**Dates of Audit:**

**Involved Personnel in Audit:**

<table>
<thead>
<tr>
<th>L.</th>
<th>General Program Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Written Program</td>
<td>A written respiratory protection program (RPPP) exists and is specific to the institution. It includes the following:  - Procedures for selecting respirators.  - Medical evaluations of employees required to wear respirators as specified in WAC 296-842-1005.  - Fit testing procedures.  - Routine-use procedures and emergency-use respirator procedures.  - Procedures and schedules for cleaning, disinfesting, storing, inspecting, reporting, discarding, and maintaining respirators.  - Training on respiratory hazards, and proper use and maintenance of respirators.  - Program evaluation procedures.</td>
</tr>
<tr>
<td></td>
<td>Comments:</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Voluntary Use Program</td>
<td>A procedure exists to ensure that workers who voluntarily wear respirators comply with the medical evaluation, cleaning, storing, and maintenance requirements of the standard.  - Employees are provided a copy of Table I per WAC 296-842-1305.  - Employees who use filtering face pieces are offered fit consultation.  - Voluntary respirator use is not permitted if it interferes with the ability to work safely or creates health hazards.</td>
</tr>
<tr>
<td></td>
<td>Comments:</td>
<td></td>
</tr>
</tbody>
</table>

**3.** Program Administrator  
There is a designated program administrator within the applicable institution, who consults the UW program administrator as needed.  
Comments:

**4.** Program Updates  
The written program has been reviewed and updated within the past 5 years to reflect changes in hazards, work practices, and available controls.  
Comments:

**5.** Cost of Respiratory Protection Resources  
The institution provides equipment, training, and medical evaluations at no cost to employees.  
Comments:

**6.** Hazard Evaluations  
A documented hazard evaluation exists for each respirator using group.  
Comments:

**7.** IDU conditions  
No institution employees are exposed to environments that could be considered immediately dangerous to life and health (IDLH).  
Comments:

**8.** NIOSH Certification  
Respirators purchased are certified by the National Institute for Occupational Safety and Health (NIOSH) and used under the conditions of certification.  
Comments:

**9.** Respirator Selection  
Respirators are selected based on the workplace hazards evaluated and workplace use factors affecting respirator performance and reliability. They are also appropriate for the chemical state and physical form of the contaminant as follows:  - Air-purifying respirators (APRs) used for protection against gases and vapors are equipped with end-of-service-life indicators (ESL) or a change schedule has been implemented;  - All APRs used are NIOSH-certified under 42 CFR Part 84.  
Comments:
Appendix J (continued): Respirator Program Evaluation Checklist

### 10. Size and Model Availability
- A sufficient variety of respirator sizes and models are available to correctly fit and be acceptable to the using population.

### 11. Program Evaluation
- The program is routinely evaluated for effectiveness.
- Supervisors periodically monitor respirator use to ensure it is being done properly.
- Employees using respirators are regularly polled about their views on program effectiveness and any perceived problems.

### 8. Medical Evaluations

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</table>

#### 1. Medical Evaluation Compliance
- All respirator-using employees have been medically cleared prior to wearing a respirator for the first time.
- (Verify with spot check of existing medical clearance record for known respirator users.)

#### 2. LCHP Requirement
- A licensed healthcare practitioner (LCHP) performs all medical evaluations. This individual is noted on each employee’s medical clearance document.
- The LCHP has access to information on the type and nature of an employee’s respirator use, as well as the written RPP prior to performing the evaluation.

#### 3. Medical Evaluation Content
- The medical evaluations obtain the information requested in the form provided by WAC 296-842-22055 (L.6) provided medical questionnaire.

### 4. Medical Evaluation Follow-up
- Employees are provided follow-up medical exams or consultation if their initial medical evaluation reveals that a follow-up medical evaluation is needed (e.g., positive response to questions 3.6 in part two or 3.6 in part 3 of the DOH questionnaire).

### 5. Method of Evaluation
- Medical evaluations are administered confidentially during normal work hours, and in a manner that is understandable to employees.

### 6. Communication of Evaluation
- Employees are provided the opportunity to discuss their medical evaluation results with their LCHP.
- Written documentation from the LCHP regarding each employee’s ability to wear a respirator is created and retained, and each employee is given a copy of his or her recommendations.

### 7. Reevaluation
- Employees are given additional medical evaluations when:
  - The employee reports a change in symptoms related to his/her ability to use a respirator.
  - The LCHP, RFP administrator, or supervisor determines that a medical evaluation is necessary.
  - Information from the RFP suggests a need for reevaluation.
  - Workplace conditions have changed in a way that could potentially place an increased burden on the employee’s health.

### III. Fit Testing

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</table>

#### 1. Fit Test Compliance
- Employees who are using tight-fitting respirator face pieces have passed an appropriate fit test prior to being required to use a respirator.
### Appendix J (continued): Respirator Program Evaluation Checklist

<table>
<thead>
<tr>
<th>No.</th>
<th>Item Description</th>
<th>Checklist</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Fit Test Compatibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Annual Fit Testing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Fit Testing Methods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Personnel Requirements</td>
<td></td>
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<tr>
<td>6.</td>
<td>Facial Hair</td>
<td></td>
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<tr>
<td>7.</td>
<td>Seal Checks</td>
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</tbody>
</table>

#### IV. Maintenance and Storage

<table>
<thead>
<tr>
<th>No.</th>
<th>Item Description</th>
<th>Checklist</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Respirator Maintenance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Current Condition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Respirator Cleaning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Respirator Storage</td>
<td></td>
<td></td>
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<tr>
<td>5.</td>
<td>Inspection</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### V. Training and Information

<table>
<thead>
<tr>
<th>No.</th>
<th>Item Description</th>
<th>Checklist</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Training Compliance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix J (continued): Respirator Program Evaluation Checklist

<table>
<thead>
<tr>
<th>2. Training Content</th>
<th>Training includes the following content:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Why the respirator is necessary and the consequences of improper fit, use, or maintenance.</td>
</tr>
<tr>
<td></td>
<td>- Limitations and capabilities of the respirator.</td>
</tr>
<tr>
<td></td>
<td>- How to inspect, put on, remove, use, and check seals of the respirator.</td>
</tr>
<tr>
<td></td>
<td>- Maintenance and storage procedures.</td>
</tr>
<tr>
<td></td>
<td>- Medical signs and symptoms to be aware of during respirator use.</td>
</tr>
<tr>
<td></td>
<td>- The general requirements of the respirator standard.</td>
</tr>
</tbody>
</table>

**Comments:**

<table>
<thead>
<tr>
<th>3. Training Review/Update</th>
<th>Employees are retrained if:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Changes to the workplace area that might affect respirator use.</td>
</tr>
<tr>
<td></td>
<td>- Whenever training appears necessary for an individual.</td>
</tr>
<tr>
<td></td>
<td>Training content is reviewed on a regular basis and updated as needed.</td>
</tr>
</tbody>
</table>

**Comments:**

<table>
<thead>
<tr>
<th>4. Training Delivery</th>
<th>Training is conducted in a standardized and reproducible manner</th>
</tr>
</thead>
</table>

**Comments:**

**Recordkeeping**

<table>
<thead>
<tr>
<th>1. Medical Evaluations</th>
<th>Records of all medical evaluations are retained. This includes written recommendations from the DHCP.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Fit testing</td>
<td>Fit testing records are all retained. Fit testing records must include:</td>
</tr>
</tbody>
</table>

**Employee name**

**Test date**

**Type of fit test performed**

**Description of respirator tested**

**Results of fit tests**

<table>
<thead>
<tr>
<th>3. Training</th>
<th>Training records are retained, and include employee names and dates trained.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Written Program</td>
<td>The written RPP is published and retained.</td>
</tr>
<tr>
<td>5. Access to Records</td>
<td>Affected employees all have access to the specific records that pertain to them.</td>
</tr>
</tbody>
</table>

**Responsible Parties**

Local Program Administrator:

Safety Officer/Respirator Coordinator:

Director of Employee Health

Designated Fit tester(s):

Other involved Occupational Healthcare Provider(s):

**Inventory**

<table>
<thead>
<tr>
<th>Number of Required Users:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Voluntary Users:</td>
</tr>
<tr>
<td>Types of Tight-Fitting Respirators Used:</td>
</tr>
<tr>
<td>Types of Other Respirators Used:</td>
</tr>
<tr>
<td>Main Client Groups Serviced (e.g., Facilities Services):</td>
</tr>
</tbody>
</table>

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Appendix K: Voluntary Respirator Use for Lab Animal Allergens

EH&S has made a determination that filtering facepiece respirators, such as the N-95 disposable particulate mask, may be used on a voluntary basis specifically for protection from exposure to lab animal allergens. EH&S recommends the voluntary use of N95 respirators for additional comfort and protection when working around animal allergens.

The voluntary use of an N-95 disposable particulate mask is a component of the University’s strategy to reduce exposure to lab animal allergens. Additional information about lab animal allergies can be found in the National Institute for Occupational Safety and Health’s publication for Prevnting Asthma in Animal Handlers.

Employees may self-select to wear an N-95 respirator for lab animal allergen concerns, or they may be suggested this course of action by the Animal Use Medical Screening (AUMS) process. It should be noted that animal husbandry staff may be required to wear filtering facepiece respirators depending on their group’s current activities and resulting hazard assessment.

If an employee requests to wear a respirator other than a filtering facepiece respirator for animal-allergen protection, they must contact their supervisor. The supervisor must contact EH&S to initiate the appropriate respirator program procedures that cover medical evaluations, fit testing, and maintenance as required by WAC 296-842.

Any employee who experiences any difficulties while wearing the filtering facepiece respirator must immediately inform his or her supervisor.

The following responsibilities are held by employees and supervisors in reference to voluntary respirator use for lab animal allergens:

**Employees:**
Notify your supervisor that you want to wear a filtering facepiece respirator. Your supervisor will provide you with a copy of OHS Form 405, Advisory Information for Employees Who Voluntarily Use Respirators (Appendix B). Sign this form where indicated and give a copy to your supervisor.

Employees are responsible for the proper use and care of the respirator in compliance with manufacturer’s instructions.

**Supervisors:**
Provide the respirator user with a copy of OHS Form 405, Advisory Information for Employees Who Voluntarily Use Respirators (Appendix B); ensure that the employee understands the handout content and signs the form; and maintain a copy of the signed form for your records and ensure the respirator user keeps their signed copy.