



INDIANA UNIVERSITY

OFFICE OF THE EXECUTIVE VICE PRESIDENT
FOR UNIVERSITY ACADEMIC AFFAIRS
University Environmental Health and Safety

Respiratory Protection Program

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1. INTRODUCTION

1.1. Purpose

Indiana University Environmental Health and Safety (EHS) has developed this program to promote a safe work environment and to protect the health and safety of Indiana University faculty and staff who are potentially exposed to airborne contaminants or may occupy an oxygen deficient atmosphere. The Occupational Safety and Health Administration (OSHA) promulgated a final rule [29 CFR 1910.134](#). This standard applies to all employees who are required to wear a respirator for any of their job tasks.

1.2. Scope

This program applies to all Indiana University faculty and staff who are exposed to airborne contaminants that cannot be controlled through engineering or administrative controls. Employees who anticipate wearing respiratory equipment during an emergency incident are also covered.

This program has the following objectives:

1. Identify employees that are exposed to hazardous levels of airborne contaminants or become involved in tasks that take place in oxygen deficient atmospheres;
2. Choose a respirator and filter or cartridge that will offer adequate protection. If a filter or cartridge doesn't offer adequate protection, supplied air respirator may need to be used;
3. Conduct all required medical surveillance to ensure that employees are physically able to wear respiratory protection;
4. Fit test all employees who are required to wear a respirator during their work tasks; and
5. Train employees required to wear a respirator on the proper use, maintenance and storage of the respirator.

No employee of Indiana University shall be issued or required to wear a respirator until the need for such protection is validated by IUEHS and the affected employee has met the criteria set forth by OSHA.

2. AUTHORITY AND RESPONSIBILITY

2.1. Environmental Health and Safety shall be responsible for:

1. Developing and administering the Indiana University Respiratory Protection Program;
2. Identifying work areas within Indiana University facilities that have a need for employees to use a respirator and perform evaluations;
3. Performing all necessary personal air monitoring to determine exposure to potentially hazardous airborne contaminants;
4. Determining if engineering and administrative controls can be put in place to eliminate exposure to airborne hazards;
5. Providing training and fit testing, or verifying it is done accordingly, to employees who are required to use a respirator;
6. Ensuring that the employees are medically fit to wear a respirator;
7. Maintaining medical approval, fit test and training records;
8. Evaluating and updating the program whenever new information is available; and
9. Ensuring compliance with all federal, state, and local regulations.

2.2. Departments shall be responsible for:

1. Identifying employees that are working with or have the potential to be exposed to hazardous airborne contaminants;
2. Notifying Environmental Health and Safety for the respective campus of potential respiratory hazards;
3. Providing the appropriate work practices and engineering controls to control hazardous airborne contaminants;
4. Providing necessary respiratory protection for all faculty and staff;
5. Providing necessary equipment so that the user is able to clean and disinfect their personal respirator after each use;
6. Ensuring that all faculty and staff who are assigned to workplaces where there is exposure to hazardous airborne contaminants have received the proper training, fit testing, medical evaluation and equipment;
7. Enforcing the proper use and maintenance of respiratory equipment as necessary;
8. Covering costs associated with medical evaluations; and
9. Coordinating and consulting with EHS to ensure compliance with all state and federal requirements.

2.3. Employees shall be responsible for:

1. Completing the mandatory medical questionnaire and any medical evaluation requirements deemed necessary by the evaluating physician;
2. Attending annual respiratory training and fit testing;
3. Performing care and maintenance of the respirator;
4. Using the respirator correctly and conducting the proper pressure checks each time the respirator is donned;
5. Notifying his/her supervisor of any problems with the respirator or concerns about exposure to respiratory hazards;
6. Notifying his/her supervisor of any other respiratory hazards that have not been adequately addressed; and
7. Maintaining facial surface consistent with a proper fit of the respirator (i.e., no facial hair that comes between the sealing surface of the face piece and the face or that interferes with valve function).

2.4. Medical Evaluator, as identified by each respective campus, shall be responsible for:

1. Reviewing medical evaluation forms to determine if an employee is medically fit to wear respiratory protection equipment;
2. Determining what tests, evaluations or medical checks are necessary to make the determination if an employee is medically fit to wear respiratory protection equipment;
3. Providing a follow-up medical evaluation for any employee who demonstrates the need for a follow-up medical examination based on responses from the questionnaire;
4. Conducting routine medical examinations to determine if respirator wearers have been exposed to harmful levels of respiratory hazards; and
5. Maintaining records as prescribed in the Recordkeeping section.

3. PROGRAM ELEMENTS

3.1. Permissible Practice

The primary objective shall be to prevent atmospheric contamination in the control of occupational diseases caused by breathing contaminated air. This shall be accomplished by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible (or while they are being instituted), appropriate respirators shall be provided and used consistent with this program when necessary.

3.2. Voluntary Use of a Respirator

Where respirator use is not required, respirators may be provided at the request of the employees or employees shall be permitted to wear their own respirator, if EHS determines that the respirator use will not in itself create a hazard.

If IUEHS determines that a voluntary respirator is permissible, the document Appendix D- Voluntary Use - "Information for Employees Using Respirators When Not Required under the Standard" shall be provided. [Appendix D](#) of this Program shall be completed and signed by both the employee and supervisor and retained by the supervisor.

Each employee using a respirator voluntarily shall meet the medical criteria of this program to ensure he/she is medically able to use the respirator. The employee shall follow all cleaning, storage, and maintenance requirements in this program to ensure that the respirator does not present a health hazard to the user. Indiana University is not fiscally responsible for providing respirators, nuisance dust/procedural masks, or medical evaluations for those who voluntarily use them. The decision to purchase those items for voluntary use will be left up to the discretion of the department.

Exception: Employees who voluntary use nuisance dust and procedural masks are not required to meet the medical criteria of this program.

3.3. Selection and Types of Respirators

Departments, with the assistance of EHS, shall identify and evaluate respiratory hazard(s) in the workplace for each operation, process, or work area where airborne contaminants may be present in routine operations or in emergencies. This evaluation shall include a reasonable estimate of employee exposures to respiratory hazard(s) and identification of the contaminant. Where employee exposure cannot be identified or reasonably estimated, the atmosphere shall be considered to be immediately dangerous to life and health (IDLH).

There are two basic classes of respirators: air purifying and atmosphere supplying.

- Air-purifying respirators use filters or sorbents to remove harmful substances from the air. They range from simple disposable masks to powered air-purifying respirators (PAPR's). Air-purifying respirators do not supply oxygen and may not be used in oxygen-deficient atmospheres or in areas that are immediately dangerous to life or health (IDLH).
- Atmosphere-supplying respirators are designed to provide breathable air from a clean air source other than the surrounding contaminated work atmosphere. They range from supplied-air respirators and self-contained breathing apparatus (SCBA's) to complete air-supplied suits.

Selection of the type of respirator to be used will be based on the potential hazard involved. Essential information which will be obtained and evaluated in selecting the type of respirator includes:

- The potential of working in an oxygen deficient atmosphere;
- The hazardous airborne contaminants to which employees may be exposed;
- The form of the contaminants - gas, vapor, dust, mist, fume, or combination;
- The concentration of expected hazardous airborne contaminants;
- IDLH levels and permissible exposure limits (PEL's) for the contaminants;
- Flammable limits, odor thresholds, and other properties of the contaminants;
- Recommended protection factors for specific types of respirators;
- The likelihood of obtaining a proper fit;
- Comfort of the user relative to heat, humidity, and other conditions;
- Compatibility with heavy equipment and chemical protective clothing; and
- Availability of essential supplies, such as cartridges, and repair parts.

Once the general type of respirator has been selected for the job, the make, model and size will be chosen from those approved by the National Institute for Occupational Safety and Health (NIOSH) for the contaminant involved.

3.3.1. Respirators for IDLH Atmospheres

For protection from IDLH atmospheres, one of the following shall be provided:

- A full facepiece pressure demand Self Contained Breathing Apparatus (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.

Respirators provided only for the escape from IDLH atmospheres shall be NIOSH-Certified for escape from the atmosphere which they will be used.

All oxygen-deficient atmospheres shall be considered IDLH.

3.3.2. Gas and Vapor Protection

For protection against gases and vapors, one of the following respirators shall be provided;

- An atmosphere-supplying respirator; or
- An air-purifying respirator, provided that the respirator is equipped with an end-of-service-life-indicator (ESLI) certified by NIOSH for the contaminant or when there is no ESLI appropriate for conditions in the work place, refer to Appendix C "Respirator Cartridge Change-Out Schedules.

3.3.3. Particulate Protection

For protection against particulates, one of the following respirators shall be provided:

- An atmosphere-supplying respirator; or
- An air-purifying respirator equipped with a filter certified by NIOSH under 30 CFR part II as a high efficiency particulate air (HEPA) filter, an air purifying respirator equipped with a filter certified for particulates by NIOSH under 42CFR part 84; or
- For contaminants consisting primarily of particles with mass median aerodynamics diameters (MMAD) of at least 2 micrometers, an air-purifying respirator equipped with any filter certified for particulates by NIOSH.

3.3.4. Tuberculosis Exposure (TB) and other Infectious Disease Control

For protection against Tuberculosis or other infectious diseases, one of the following respirators shall be provided:

- A NIOSH approved N-95 particulate respirator which meets CDC guidelines for TB exposure control; or
- A powered air purifying respirator (PAPR) in combination with a high efficiency particulate air (HEPA) filter, and head cover or hood.

3.3.5. Biological Exposure Control

- An atmosphere-supplying respirator; or
- A NIOSH approved N-95 or greater particulate respirator; or
- A powered air purifying respirator (PAPR) in combination with a high efficiency particulate air (HEPA) filter, and head cover or hood.

3.4. Medical Evaluation

Using a respirator may place a physiological burden on employees which vary with the type of respirator work, the job and workplace conditions in which the respirator is being worn and the medical status of the employee.

3.4.1. General Requirements

A medical evaluation is required by OSHA's Respiratory Protection Standard ([29 CFR 1910.134](#)) for employees who wear respirators. OSHA requires that the medical evaluation consist of, at minimum,

completion of the Respiratory Medical Evaluation Questionnaire by the employee and review of the questionnaire by a licensed health care professional or competent person. This requirement is intended to ensure that employees are physically able to wear a respirator.

3.4.2. Medical Evaluation Procedures

Employees shall obtain and complete a medical evaluation questionnaire by contacting IUEHS for your respective campus, or by visiting the website at www.protect.iu.edu/ehs. All completed questionnaires shall be returned to the Indiana University Medical Evaluator or IUEHS in a sealed envelope marked "confidential" for review by the Indiana University Medical Evaluator for your respective campus.

The Respiratory Medical Evaluation Questionnaire (Appendix B-1) shall be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee. If the employee needs assistance in filling out or understanding the questionnaire, the Indiana University Medical Evaluator will provide assistance, so as to maintain confidentiality.

IUEHS shall provide the following information upon request to the Indiana University Medical Evaluator prior to the clinic making a recommendation concerning an employee's ability to use a respirator:

- The type and weight of the respirator to be used by the employee;
- The duration and frequency of respirator use (including use for rescue and escape);
- The expected physical work effort;
- Additional protective clothing and equipment to be worn;
- Temperature and humidity extremes that may be encountered;
- A copy of INDIANA UNIVERSITY's Respiratory Protection Program; and
- A copy of [29 CFR 1910.134](#).

The Indiana University Medical Evaluator shall provide a written recommendation regarding the employee's ability to use the respirator including any limitations on respirator use related to the medical condition of the employee, or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator. The Indiana University Medical Evaluator shall also identify the need, if any, for follow-up medical evaluations.

3.4.3. Follow-up Medical Examination

A follow-up medical evaluation may be required for employees giving a positive response to any question among questions 1 through 9 in Part A, Section 2 of the questionnaire.

The follow-up medical evaluation shall include any medical tests, consultations or diagnostic procedures that the Indiana University Medical Evaluator deems necessary to make a final determination for respirator usage.

3.4.4. Additional Medical Evaluations

Additional medical evaluations shall be provided if:

- An employee reports medical signs or symptoms that are related to the ability to use a respirator;
- The Indiana University Medical Evaluator, the supervisor or representative from EHS recommends a re-evaluation;
- Information from the Respiratory Protection Program, including observations made during fit testing and program evaluation, indicates a need for employee re-evaluation; or
- A change occurs in workplace conditions (e.g., physical work effort, protective clothing, temperature) that may result in substantial increase in the physiological burden placed on an employee.

3.5. Fit Testing Procedures

After receipt of medical clearance from the Indiana University Medical Evaluator and before an employee may be required to use any respirator with a negative or positive pressure tight-fitting facepiece, the employee shall be fit tested with the same make, model, style, and size of respirator that will be used.

Environmental Health and Safety or their designee shall provide qualitative or quantitative respirator fit tests in accordance with the OSHA-accepted protocol found in [29 CFR 1910.134, Appendix A](#), the OSHA Respirator Standard for employees prior to initial use of the respirator, whenever a different respirator facepiece (e.g., size, style, model, make) is used and at least annually thereafter.

An additional fit test shall be conducted whenever any of the following occurs:

- Significant weight change (20 pounds or more);
- Significant facial scarring in the area of the facepiece seal;
- Significant dental changes;
- Reconstructive or cosmetic surgery; or
- Other conditions that may interfere with the facepiece seal.

Fit tests will not be conducted on respirator users who have facial hair that will affect the seal between the respirator and skin.

4. Maintenance and Care

The respirators shall be kept in proper working condition by performing cleaning and disinfection, proper storage, inspection and repair. This [link](#) provides the OSHA respirator cleaning procedures.

Cleaning and disinfection

Employees shall be provided with a respirator that is clean, sanitary and in good working order. Employees shall clean and disinfect assigned respirators based on the manufactures recommendations. The respirators shall be cleaned and disinfected at the following intervals:

- Respirators issued for the exclusive use of an employee shall be cleaned and disinfected as often as necessary to be maintained in sanitary conditions;
- Respirators issued to more than one employee shall be cleaned and disinfected before being worn by a different individual;
- Respirators maintained for emergency use shall be cleaned and disinfected after each use;
- Respirators used in fit testing and training shall be cleaned and disinfected after each use; and
- Disposable particulate respirators shall be used exclusively by one employee and shall be discarded at the end of their service life.

Storage

Respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals. They shall also be stored to prevent deformation of the facepiece and exhalation valve. Respirators used specifically for emergencies shall be kept accessible to the work area, stored in compartments or in covers that are clearly marked as containing emergency respirators and in accordance to the manufactures instructions.

Inspection

Respirators shall be inspected before each use and during cleaning. Respirators used in emergency situations shall be inspected at least month and in accordance with the manufacture's recommendations, and be checked for proper function before and after each use, Emergency escape-only respirators shall be inspected before being placed in the work area for use.

The inspection shall include the following:

- Respirator function
- Tightness of connections,
- The condition of the various parts including;
 - The facepiece
 - Head straps

- Valves
- Connecting tube
- Cartridge, canister or filters
- Elastometric parts shall be checked for pliability and signs of deterioration.

Repairs

Respirators that fail an inspection or are found to be defective shall be removed from service. The respirators shall either be discarded and replaced or repaired and adjusted in accordance with the following procedure:

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

5. TRAINING & RECORDKEEPING

5.1. Training

Employees using a half-face, or full-face respirator shall complete the online half-face and full-face Respiratory Protection Training. Employees using an N95 respirator shall complete the Disposable dust/N95 Respiratory Protection Training. Training is provided by IUEHS through one.iu. The training must be completed prior to being required to use a respirator in the workplace. The following items should be identified during the respirator training:

- Why a respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator;
- Limitations and capabilities of the respirator;
- Components of the respirator: head straps, facepiece seal, valves, filters/cartridges;
- Pre-use inspection and evaluation;
- How to properly don and doff a respirator;
- Positive and negative pressure fit check procedures;
- When and how to change out the filters/cartridges;
- Factors that could affect the fit of the mask;
- Post-use inspection;
- Proper maintenance and storage of the respirator;
- Cleaning and disinfecting the respirator;
- How to recognize medical signs and symptoms that may limit or prevent effective use of respirators; and
- The general requirements of the OSHA Respiratory Protection Standard.

5.1.1. Retraining

Retraining shall be conducted at least annually or when the following situation occurs:

- Changes in the workplace or the type of respirator render previous training obsolete;
- Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill; or
- Any other situation arises in which retraining appears necessary to ensure safe respirator use.

5.2. Recordkeeping

5.2.1. Fit Test Records

Environmental Health and Safety (EHS) shall maintain all copies of respirator training and fit-testing records for all Indiana University employees fit tested by EHS. Fit test records shall be retained until the next fit test is administered.

5.2.2. Medical Evaluations

Records of medical evaluations shall be retained by the Indiana University Medical Evaluator for the duration of employment and 30 years thereafter.

6. REFERENCES

[29 CFR 1910.134](#)

[29 CFR 1910.134, Appendix A, Fit Testing Protocols](#)

[29 CFR 1910.134, Appendix B1, User Seal Check Procedures](#)

[29 CFR 1910.134, Appendix B2, Respirator Cleaning Procedures](#)

[29 CFR 1910.134, Appendix C, OSHA Respirator Medical Evaluation Questionnaire](#)

[29 CFR 1910.134 Appendix D, Information for Employees Using Respirators When not Required Under Standard](#)

7. REVISIONS

New Document: April 30, 2014

APPENDIX A – GLOSSARY

Air-purifying Respirator: A respirator with an air-purifying filter, cartridge or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

Canister or Cartridge: A container with a filter, sorbent, or catalyst, or combination of these items, which removes specific contaminants from the air passed through the container.

Disposable Respirator: A negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium. To be a certified filtering facepiece respirator, the mask must be NIOSH approved, double strapped and clearly labeled with both a letter designation (N, R, P) indicating resistance to oil degradation and a filtering efficiency (95, 99, 100)

Emergency Situation: Any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment that may or does result in an uncontrolled significant release of an airborne contaminant.

Employee Exposure: Exposure to a concentration of an airborne contaminant that would occur if the employee were not using respiratory protection.

End-of-Service-Life Indication (ESLI): A system that warns the respirator user of the approach of the end of adequate respiratory protection, for example, that the sorbent is approaching saturation or is no longer effective.

Escape-only Respirator: A respirator intended to be used only for emergency exit.

Filter or Air Purifying Element: A component used in respirators to remove solid or liquid aerosols from the inspired air.

Fit Test: The use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

High Efficiency Particulate Air (HEPA) Filter: A filter that is at least 99.97% efficient in removing monodisperse particles of 0.3 micrometers in diameter. The equivalent NIOSH 42 CFR 84 particulate filters are the N100, R100 and P100 filters.

Immediately Dangerous to Life or Health (IDLH): An atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.

Negative Pressure Respirator: A respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.

Nuisance Dust and Procedural Masks: These masks are barrier devices that have not been NIOSH-approved. They typically do not provide a tight fit between the mask and face. Examples include: biosafety masks, cleanroom masks, face masks, nuisance dust masks, and surgical masks.

Oxygen Deficient Atmosphere: An atmosphere with an oxygen content below 19.5% by volume.

Physician or Other Licensed Health Care Professional (PLHCP): An individual whose legally permitted scope of practice (e.g., license, registration or certification) allows him or her to independently provide, some or all of the health care services required by the standard.

Positive Pressure Respirator: A respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

Powered Air-purifying Respirator (PAPR): An air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

Pressure Demand Respirator: A positive pressure atmosphere-supplying respirator that admits breathing air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.

Qualitative Fit Test (QLFT): A pass/fail fit test to assess the adequacy of respiratory fit that relies on the individual's response to the test agent.

Quantitative Fit Test (QNFT) - The use of a machine to measure the actual amount of leakage into the facepiece.

Self-Contained Breathing Apparatus (SCBA): An atmosphere supplying respirator for which the breathing air source is designed to be carried by the user.

Service Life: The period of time that a respirator, filter or sorbent, or other respiratory equipment provides adequate protection to the wearer.

Supplied Air Respirator (SAR) or Airline Respirator: An atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

User Seal Check: An action conducted by the respirator user to determine if the respirator is properly seated to the face.

APPENDIX B-1 – RESPIRATOR MEDICAL QUESTIONNAIRE

This questionnaire will be used in determining whether or not you have a medical condition that may affect your ability to wear a respirator. All medical information is considered confidential.

Part A. Section 1		
Name:		Today's Date:
DOB: / /	Sex: M / F	Age: _____
Height: _____	Weight: _____	
Are you: IU Employee ___ MD ___ IUSOM Faculty ___ Resident/Fellow ___ Student ___		IU User Name: _____
Department: _____	Manager: _____	Job Title: _____
How best to reach you: _____	Best time to call: _____	Phone/Pager: _____
1. Check the type of Respirator you will use and state the manufacturer name: Half-face APR ____, Type _____ Full-face APR ____, Type _____ PAPR ____, Type _____ SAR ____, Type _____ SCBA ____, Type _____ Disposable Respirator (N-95, used for TB/SARs, Q-fever, particles), Type _____		
2. Have you worn a respirator before? _____ If "Yes", what type(s) _____ Now ___ Past ___		
Part A. Section 2		
<i>Please check the appropriate box below</i>		
	NO	YES
1. Do you currently smoke tobacco, or have you smoked in the last month?		Now ___ Past ___
2. Have you ever had any of the following conditions?		Now ___ Past ___
a. Seizures (fits):		
b. Diabetes (sugar disease):		Now ___ Past ___
c. Allergic reactions that interfere with you breathing:		Now ___ Past ___
d. Claustrophobia (fear of closed-in places):		Now ___ Past ___
e. Trouble smelling odors:		Now ___ Past ___
3. Have you ever had any of the following pulmonary or lung problems?		Now ___ Past ___
a. Asbestosis		
b. Asthma		Now ___ Past ___
c. Chronic bronchitis		Now ___ Past ___
d. Emphysema		Now ___ Past ___
e. Pneumonia:		
f. Tuberculosis:		Now ___ Past ___
g. Silicosis		Now ___ Past ___
h. Pneumothorax (collapsed lung)		Now ___ Past ___
i. Lung cancer:		Now ___ Past ___
j. Broken ribs		Now ___ Past ___
k. Other chest injuries/surgeries		Now ___ Past ___
l. Any other lung problem that you've been told about:		Now ___ Past ___
4. Do you currently have any of the following symptoms of pulmonary or lung illness?		
a. Shortness of breath		
b. Shortness of breath when walking fast on level ground or walking up a slight hill or incline:		
c. Shortness of breath when walking with other people at an ordinary pace on level ground:		
d. Have to stop for breath when walking at your own pace on level ground:		
e. Shortness of breath when washing or dressing yourself:		
f. Shortness of breath that interferes with your job:		
g. Coughing that produces phlegm (thick sputum):		
h. Coughing that wakes you early in the morning:		

i. Coughing that occurs mostly when you are lying down:		
j. Coughing up blood in the last month:		
k. Wheezing:		
l. Wheezing that interferes with your job:		
m. Chest pain when you breathe deeply:		
n. 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 ?		Now___ Past___
a. Heart Attack:		
b. Stroke:		Now___ Past___
c. Angina:		Now___ Past___
d. Heart failure:		Now___ Past___
e. Swelling in your legs or feet (not caused by walking):		Now___ Past___
f. Heart arrhythmia (heart beating irregularly):		Now___ Past___
g. High blood pressure:		Now___ Past___
h. Any other heart problem that you've been told about:		Now___ Past___
6. Have you ever had any of the following cardiovascular or heart symptoms ?		Now___ Past___
a. Frequent pain or tightness in your chest:		
b. Pain or tightness in your chest during physical activity:		Now___ Past___
c. Pain or tightness in your chest that interferes with your job:		Now___ Past___
d. In the past two years, have you noticed your heart skipping or missing a beat:		Now___ Past___
e. Heartburn or indigestion that is not related to eating:		Now___ Past___
f. Any other symptoms that you think may be related to heart or circulation problems:		Now___ Past___
7. Do you currently take medication for any of the following problems?		
a. Breathing or lung problems:		
b. Heart trouble		
c. Blood pressure:		
d. Seizures (fits):		
8. If you've ever used a respirator, have you ever had any of the following problems? (If you have never used a respirator, check here _____):		
a. Eye irritation:		
b. Skin allergies or rashes:		
c. Anxiety that occurs only when you use the respirator:		
d. General weakness or fatigue:		
e. Any other problem that interferes with your use of a respirator:		
9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire?		

The following questions must be answered by employees who will use either a full-facepiece respirator or an SCBA.

<i>Please check appropriate box below</i>	NO	YES
1. Have you ever lost vision in either eye (temporarily or permanently):		Now___ Past___
2. Do you currently have any of the following vision problems?		
a. Wear contact lenses:		
b. Wear glasses:		
c. Color blind:		
d. Any other eye or vision problem:		
3. Have you ever had an injury to your ears, including a broken ear drum:		Now___ Past___
4. Do you currently have any of the following hearing problems?		
a. Difficulty hearing:		
b. Wear a hearing aid:		
c. Any other hearing or ear problem:		
5. Have you ever had a back injury?		Now___ Past___

<i>Please check appropriate box below</i>	NO	YES
6. Do you currently have any of the following musculoskeletal problems?		
a. Weakness in any of your arms, hands, legs, or feet:		
b. Back pain:		
c. Difficulty fully moving your arms or legs:		
d. Pain or stiffness when you lean forward or backward at the waist:		
e. Difficulty fully moving your head up or down:		
f. Difficulty fully moving your head side to side:		
g. Difficulty bending at your knees:		
h. Difficulty squatting to the ground:		
i. Climbing a flight of stairs or a ladder carrying more than 25 pounds:		
j. Any other muscle or skeletal problem that interferes with using a respirator:		

If you answered “Yes” to any of the above questions, please provide more information (e.g. specific diagnoses, medications, symptoms) in the space below:

You make talk to the health care professional reviewing this questionnaire. Please contact EHS for your respective campus for contact information.

Employees Signature: _____ Date: _____

APPENDIX B-2 – RESPIRATOR FIT TEST RECORD

Section 1 – Employee Information			
Name:		Job Title:	Date:
Department/Unit:			
Section 2 – Respirator Issuance			
Make	Model	Style	Size
<i>The respirator will be used for protection from:</i>			
Section 3 – Fit Test Method			
Quantitative Fit Test <input type="checkbox"/> Pass <input type="checkbox"/> Fail		Fit Factor:	
Irritant Smoke Tubes <input type="checkbox"/> Pass <input type="checkbox"/> Fail			
Iso-Amyl Acetate <input type="checkbox"/> Pass <input type="checkbox"/> Fail			
Comments:			
Section 4 – Conditions Which Could Affect Respirator Fit (check all that apply)			
<input type="checkbox"/> Clean shaven		<input type="checkbox"/> Facial Scar	
<input type="checkbox"/> 1-2 day beard growth		<input type="checkbox"/> Dentures absent	
<input type="checkbox"/> 2+ beard growth		<input type="checkbox"/> Glasses	
<input type="checkbox"/> Moustache		<input type="checkbox"/> None	
Comments:			
Section 5 – Employee Acknowledgement Of Test Results			
<p>This signature acknowledges that I have successfully been fit tested for respiratory protection and have received training on the proper usage, cleaning, and storage, limitations of the respirator, and cartridge change-out. I will report to my supervisor:</p> <ol style="list-style-type: none"> Any new medical signs or symptoms that relate to my ability to wear a respirator. Any change in workplace conditions (e.g., increased physical work effort required, additional protective clothing, temperature) that result in substantial increase in physical stress. 			
Employee Signature:		Date:	
Signature of Fit Tester:		Date:	

APPENDIX C – RESPIRATOR FILTER and CARTRIDGE CHANGE-OUT SCHEDULE

Air-purifying respirators function by removing contaminants from air before inhalation. Contaminants are removed by filtration (e.g., for asbestos, glass fiber), adsorption (e.g., for benzene, carbon tetrachloride), or by chemical reaction (e.g., for ammonia). Filters or cartridges designed for contaminant removal have limited effective service lives.

Particulate respirators or respirator filters should be changed if they become damaged, soiled, or an increase in breathing resistance becomes noticeable. In addition to these considerations, N series filters should not be used against oily aerosols, R series filters should be changed every 8 hours if used against oily aerosols; and P series filters used in environments containing oily aerosols should be limited to 40 hours of use or 30 days, whichever is first.

The service life of a cartridge depends upon many factors, including environmental conditions, breathing rate, cartridge filtering capacity, and the concentration of contaminants in the air. A safety factor should be applied to the service life estimate to assure that the change schedule is a conservative estimate.

https://www.osha.gov/SLTC/etools/respiratory/change_schedule.html

https://www.osha.gov/SLTC/etools/respiratory/change_schedule_mathmodel.html

<https://www.cdc.gov/niosh/npptl/pdfs/infographic-n-95.pdf>

APPENDIX D – VOLUNTARY USE OF RESPIRATORS

[Appendix D to Sec. 1910.134](#) (Mandatory) Information for Employees Using Respirators When Not Required Under the Standard

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

* This information is taken from [Appendix D to 29 CFR 1910.134](#), OSHA Respiratory Protection.

I have read and fully understand the provisions stated above for Voluntary Use of a Respirator.

Name: _____ Date: _____

Signature: _____

Supervisor Name: _____ Date: _____

Supervisor Signature: _____

This signed document needs to be retained by the supervisor or department in which the employees works.