



**UNIVERSITY OF
SOUTH FLORIDA**

Respiratory Protection Program

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University of South Florida (USF) Respiratory Protection Program

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University of South Florida (USF) Respiratory Protection Program

1.0 Purpose

USF's goal for managing airborne chemical, physical, and biological contaminants is primarily through the use of engineering controls that remove the contaminant (e.g. ventilation) and/or by substitution with a less toxic or hazardous contaminant. When engineering controls and substitution are not feasible for an operation or process, then respirators and personal protective equipment must be used. Respirators may also be needed to protect an employee during emergencies. An employee may elect to use a respirator on a "voluntary" basis during operations or processes that have been assessed as not requiring respiratory protection may do so but must follow the limits applied in the USF Respiratory Protection Program.

For the purposes of this program, the term "respirator" is defined as any National Institute for Occupational Safety and Health (NIOSH) certified protective facepieces, hood, or helmets that are designed to protect the wearer from inhaling hazardous contaminants in the air. USF's Respiratory Protection Program does not support the use of non-NIOSH certified "dust masks" or surgical masks that are not considered respirators and provide minimal to no protection. An exception to the use of a NIOSH certified and approved respirator may be granted due to limited availability of respirator supplies or when emergency use authorization has been granted by the Centers for Disease Control (CDC), NIOSH, or the United States Food & Drug Administration (FDA).

When respirators are needed as supplemental protection in the laboratory, worksite, classroom, studio, or in an outside area where hazardous airborne contaminants may be present or generated; NIOSH certified respirators (e.g. N95, half-face, and full-face respirators, or tight-fitting powered air-purifying respirator (PAPR), etc.) may be worn on the condition that USF's Environmental Health & Safety (EH&S) department has recognized and approved their use for that operation and that the wearer has been fit tested annually and trained in their use. A USF oversight committee may have authorizing capacity provided that this arrangement has been agreed upon in advance by EH&S.

2.0 Scope

This program applies to all University of South Florida (USF) personnel including employees, volunteers, and students that are required to wear respirators during specified operations, non-routine tasks, or for emergency operations (e.g., responding to a spill of a hazardous substance, etc.). USF's Respiratory Protection Program is consistent with the requirements of the Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1910.134, titled "Respiratory Protection".

- Contractors, subcontractors, and consultants hired by USF will be held responsible for their employee's compliance with all applicable OSHA standards while working on or around USF facilities and property.
- Other than USF hired contractors and/or consultants who are permitted to do so, **no** confined spaces on campus should be entered at any time without fully complying with USF confined space entry procedures.

If a department or research program has a specific written respiratory protection protocol, program, or plan that meets or exceeds the elements of this program, that document and associated procedures will be considered as the primary respiratory protection protocol for that department or program. Protocols developed independently of USF's Respiratory Protection Program must be reviewed and approved by EH&S.

3.0 Responsibilities

For the purposes of this respiratory protection program, **USF's Respiratory Protection Program Administrator** is the EH&S Industrial Hygienist.

A. USF's Respiratory Protection Program Administrator and/or EH&S Staff responsibilities:

- i. Maintain, evaluate, and update the USF Respiratory Protection Program.
- ii. Offer the following services to USF personnel:
 1. Conduct initial and on-going assessments for airborne contaminants using sound industrial hygiene practices. An initial assessment must be performed by EH&S before respirator use is authorized.
 - a. The exception to an EH&S performed assessment is when respiratory use is deemed necessary by Research Integrity & Compliance department personnel or by USF Health for medical students, residents, and fellows due to potential exposure to biological agents. See **Section C** below.
 2. Selection and approval of respiratory protection devices and determination of which type of respirator meets the level of protection needed.
 3. Upon receipt of completed/signed physician or other licensed healthcare professional clearance form, conduct fit testing and training.
 4. Maintain records required for the program including completed and signed Request for Medical Clearance for Respirator Use form, completed and signed voluntary use forms, fit testing forms, and training records.
- iii. Respond to incidents, inquiries, and concerns involving respirator use.

B. Supervisor responsibilities:

- i. Request an EH&S assessment of the process, task, or worksite of concern. EH&S will conduct an exposure assessment and, if deemed necessary by such assessment, will advise on proper management of potential airborne hazards identified.
- ii. Ensure scheduling and completion of mandated respirator medical clearance examinations for those under their direct supervision are performed by a physician or other licensed health care professional.
- iii. Ensure that those under their direct supervision complete respirator training and fit testing.
- iv. Ensure that those under their direct supervision complete annual medical re-evaluation & fit testing.
- v. Maintain records of completed and signed medical clearance and fit testing forms for employees under their direct supervision.
- vi. Provide personnel with the same make, model, and size of the NIOSH certified respirator as determined by assessment and the fit-test. Document the make, model, and size provided. Substitution of a respirator make, model, or size that an individual was not specifically fit tested for is not allowed.
- vii. Report any incidents or problems involving respirator use to EH&S.
- viii. If use of a respirator is determined by EH&S to be required, assume financial responsibility for initial and annual medical clearance evaluation, and initial and replacement costs of all components of the respirator determined necessary for the user.
 - a. Costs associated with the voluntary use of filtering facepiece respirators or the non-required use of tight-fitting respiratory protection, which requires full compliance with requirements of this respiratory protection program, will be incurred by the student or employee unless prior arrangements are made by the department and/or supervisor.

C. Respirator User responsibilities:

- i. No USF employee, volunteer, or student is to use a respirator unless they have been medically cleared, fit tested for the respirator specified for their use, and given training appropriate to the use of that particular respirator.
- ii. Ask their supervisor for a process, task, or worksite assessment of airborne hazards to be completed by USF EH&S staff if there is a concern or suspicion of an airborne hazardous material(s), or make request of applicable Research Integrity and Compliance personnel if biological agents will be used.
- iii. Perform a positive and negative pressure user seal check as recommended by the manufacturer upon each donning of the respirator. Maintain facial hair to be consistent with the fit and seal requirements of the type of respirator needed in their work area.
- iv. Maintain, clean, and properly store the respirator per the manufacturer's recommendations.
- v. Follow any written respirator guidance and protocols for their work area or task generating airborne contaminants.
- vi. Notify their supervisor of any changes in their health that may impact wearing the respirator.
- vii. Report any exposure incident or process change that may impact the respirator efficiency.
- viii. Attend necessary annual medical evaluation, fit testing, and training sessions.

4.0 Program Elements

A. Selection Procedure:

USF's Respiratory Protection Program Administrator or designated EH&S personnel will assist departments and/or supervisors in the selection of a NIOSH certified and approved respirator if it is deemed necessary by the process, task, or worksite assessment. An exception to the use of a NIOSH certified and approved respirator may be granted due to limited availability of respirator supplies or when emergency use authorization has been granted by the Centers for Disease Control (CDC), NIOSH, or the United States Food & Drug Administration (FDA). Respirators selected for use may include filtering facepieces, half-face, full-face, powered air purifying (PAPR), and supplied air respirators (SAR) including airline with appropriate breathing air compressor or self-contained breathing apparatus (SCBA).

- An air purifying respirator is not to be used in an oxygen deficient atmosphere, an "Immediately Dangerous to Life and Health" (IDLH) environment, or when a potential contaminant's concentration and type is not known. Only full facepiece pressure demand SCBA certified by NIOSH for a minimum service life of thirty minutes or a combination full facepiece pressure demand SAR with connected self-contained air supply can be used in oxygen deficient and IDLH environments. Respirators provided only for escape from an IDLH atmosphere must be NIOSH certified for escape from the atmosphere upon which it will be used.
- SAR (Airline or SCBA) respirator users must be trained on the use of the equipment by the manufacturer or their designated trainer to become certified as competent in its use in addition to the other training requirements listed in this program.

B. Medical Evaluation:

For required respiratory use, an individual must first undergo a medical evaluation and be cleared by a physician or other licensed healthcare professional before they will be allowed to use the respirator. The purpose of the evaluation is to screen for pre-existing medical conditions not conducive to respirator use.

Respirator users require an annual medical evaluation by a physician or other licensed health care professional. OSHA's Respirator Medical Evaluation Questionnaire, Appendix C of OSHA Standard 29 CFR 1910.134, located in **Appendix C** of this document, must be filled out by the respirator user and provided to the licensed health care professional for review. After the initial medical evaluation, the wearer will have medical evaluations at least annually to screen for changes that may affect respirator use. Upon receiving a favorable medical evaluation for initial or continued respirator use, the user may schedule a fit-test with the EH&S department.

- All medical examinations and questionnaires are to remain confidential between the individual requesting evaluation and the physician or other licensed healthcare professional. EH&S personnel are advised only of the healthcare providers opinion to allow respirator use or not through use of the completed University of South Florida Request for Medical Clearance for Respirator Use form located in Appendix B or equivalent physician or other licensed healthcare professional signed document.

If any of the following conditions have taken place after the initial or follow up annual medical evaluations or fit testing, another medical clearance and fit testing will need to occur before the annual expiration date has been reached:

- i. User has a significant weight change (+/- 10 lbs.) that could affect respirator fit.
- ii. User has any surgery involving the head, chin or jaw, or has a tooth extraction that could affect respirator fit or user's ability to work safely while wearing the respirator.
- iii. A change in dentures or braces.
- iv. Any other physical, medical, or psychological change to the user that may alter the user's ability to work safely while using the respirator.

The department and/or supervisor of the individual(s) that requires the use of a respirator will be responsible for recommending supplemental medical evaluations, and incurring any associated costs for the medical evaluation to be conducted by the physician or other licensed health care professional.

An exception to this medical evaluation requirement exists when EH&S has evaluated use and deemed that a filtering facepiece respirator, such as an N95 or other filtering facepiece (e.g. N99, N100, R95, etc.), is being used on a voluntary basis, specifically, use of a respirator when a respirator is not required for protection of the individual from a respirable hazard. A filtering facepiece respirator is defined by OSHA in 29 CFR 1910.134(b) as "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." An employee who voluntarily wears a respirator when a respirator is not required is **not** subject to the medical evaluation, cleaning, maintenance, storage, and training elements of this program. See **Section E** below for additional information on voluntary use and **Appendix D** for the Respirator Voluntary Use Form.

C. Special Cases Regarding Responsibility of Medical Evaluations:

Research laboratories where the source of funding is Department of Defense: Research Integrity & Compliance department personnel should be contacted to schedule an evaluation with a physician or other licensed healthcare professional. Research Integrity & Compliance will be responsible for coordinating medical evaluations for laboratory personnel that are required to wear respiratory protection as part of the National Institutes of Health (NIH) and/or Centers for Disease Control (CDC) infection control protocols.

USF Health Medical Students, Residents, and Fellows needing N95 medical clearance: A physician or other licensed healthcare professional in/or designated by USF Health will provide the required medical review and clearance. An EH&S process, task, or worksite evaluation will not be necessary, as the need

for use is based upon infectious disease protocols. Training and recordkeeping responsibilities will also reside with the USF Health or the individual departments therein.

D. NIOSH Certification:

All respirators must be certified by the National Institute for Occupational Safety and Health (NIOSH) and shall be used in accordance with the terms of that certification. All replacement filters, cartridges, and canisters must be labeled with the appropriate NIOSH certified labeling. An exception to the use of a NIOSH certified and approved respirator may be granted due to limited availability of respirator supplies or when emergency use authorization has been granted by the Centers for Disease Control (CDC), NIOSH, or the United States Food & Drug Administration (FDA).

E. Voluntary Respirator Use:

The Respiratory Protection Program and EH&S recognize that a person may feel the need to wear a respirator even though the workplace or task assessment has not identified airborne respiratory hazards requiring the need for respirator use. Voluntary respirator use will have limits and conditions of use. There is no option for voluntary use of any type of respirator other than the filtering facepiece (e.g., N95, N-99, N-100, R-95, P-100, etc.) type, and costs and provision of the respirator desired will be incumbent on the user. A filtering facepiece is defined as 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.

USF's Respiratory Protection Program Administrator or designated EH&S personnel must authorize voluntary respirator use. Approval will be made on a case-by-case basis. The voluntary respirator user of a filtering facepiece will be asked to read and sign the "Voluntary Use" form in **Appendix D**, a copy will be provided to the user, and a copy will be kept on file in the EH&S office. If a respirator, other than a filtering facepiece, is desired for use by an individual when not required, then the individual will be subject to the full scope of requirements of this written respiratory protection program.

F. Fit Testing:

Respirator fit testing will be conducted by USF EH&S staff using an OSHA approved qualitative fit test protocol per Appendix A of OSHA Standard 29 CFR 1910.134. The Respirator Qualitative Fit Test Record located in **Appendix A**, or a similar modified version, will be used by EH&S. Fit testing is required to identify proper respirator design and fit. The qualitative fit-test confirms the adequacy of the respirator seal by relying on the individual's response to the test agent while the user is following a required set of body movement protocols that represent typical postures used in the work environment. It is the responsibility of the department or supervisor to provide the proper make, model, and size of the respirator as determined by EH&S through the fit testing protocols. Substitution of a respirator for a make, model, or size that an individual was not fit-tested with is not allowed. When supplies of filtering facepiece respirators are abundant, these types of respirators are single use disposable PPE and should not be reused. At certain times and under certain conditions, reuse and/or decontamination of filtering facepiece respirators may be allowed to ensure continued availability. Contact EH&S for guidance regarding this allowance.

In some cases, a Quantitative Fit Test by EH&S personnel may be deemed necessary. Respirator fit testing for types of respirators other than filtering facepiece respirators and for use in any environments considered potentially oxygen deficient and IDLH require quantitative fit testing. Quantitative fit testing assesses the mask seal of a tight-fitting respirator by measuring the actual amount of leakage past the seal through a battery of body movements. Quantitative fit test protocols are also described in Appendix A of OSHA 29 CFR 1910.134.

Individuals with certain types or lengths of facial hair will be required to shave before they can be fit tested, as facial hair can interfere with the ability to get a good seal and/or can prohibit proper valve functioning. In the case of N95 fit testing, if the individual cannot be fitted for a respirator due to facial

hair or other reasons, then a loose-fitting, powered air purifying respirator (PAPR) can be purchased and provided by the department for the individual's use. Loose-fitting PAPRs are not considered to be a tight-fitting type respirator and therefore do not require fit testing.

G. Air Quality (Applies to Supplied Air Respirator (SAR) types):

USF does not routinely use SCBA or airline respirators. However, if considered and approved in advance by USF's EH&S department, the following general guidelines, at a minimum, should be followed:

1. Any department using SARs shall maintain a minimum air supply of one fully charged replacement cylinder for each SAR unit.
2. All compressed breathing air used in SAR types (airline and SCBA respirators) shall meet the requirements for Grade D breathing air per the American National Standards Institute (ANSI) Compressed Gas Association Commodity Specification of Air, G-7.1-1989.
 - In the case that SAR(s) are utilized by a department's employee(s), more specific guidelines pertaining to the particular process utilizing SARs will be developed and implemented.

H. Cleaning and Storage:

Respirators that are not single use, disposable filtering facepieces should be cleaned and stored after use in accordance with the manufacturer's instructions or per OSHA Standard 29 CFR 1910.134, Appendix B-2 titled "Respirator Cleaning Procedures". Respirators should be stored in a clean, sealable plastic bag or similar storage device provided by the manufacturer. Respirators should be stored in a clean and dry location that is free from chemical and/or physical agents that may compromise their integrity.

I. Respirator Maintenance and Cartridge Change Schedule:

Reusable respirators must be checked by the user before and after each use. Respirator checks should include a full visual evaluation of the elastomeric material of the facepiece, straps, valves, and cartridges, canisters, and filters. Perform donning procedures including placement to face, strap tightening, appropriate negative and positive pressure seal checks, and air supply and bypass flow checks depending on the type of respirator used.

Emergency use (escape only) respirators shall be inspected by the respirator user before and after use and at least once per month regardless of use frequency. A designated respirator wearer within the department should be assigned to inspect this equipment on a monthly basis. A monthly inspection log should be kept and retained at a location near the respirator.

No repairs are to be made to air purifying respirators outside of replacement of valve flaps, gaskets, or head straps. If air purifying respirators are damaged or parts are missing, they must be discarded and replaced with an identical respirator of the same make, model, and size. No repairs shall be made to airline or SCBA respirator equipment unless it is by the manufacturer or manufacturer's authorized repair representative.

Only NIOSH-approved filters, cartridges, or canisters are to be used in respirators. Cartridges or canisters should be dated when first opened and installed. Cartridges or canisters used to protect against gas and/or vapor exposures that do not have End of Service Life Indicators (ESLI) shall be changed in accordance with the manufacturer's recommendations. If manufacturer's recommendations do not exist, then OSHA's methods for estimating service life, rules of thumb, mathematical models, or field testing to determine breakthrough should be used. High-Efficiency Particulate Air (HEPA) or other particulate filters should be changed when breathing resistance increases, the filter becomes damaged, or when filter material shows signs of contamination.

USF's Respiratory Protection Program Administrator should be contacted with any questions regarding the determination of serviceable life or change out schedules of filters, cartridges, or canisters.

J. Training:

All respirator users need to be trained in respirator selection, proper fit, use, limitations, maintenance, storage, and cleaning. Individualized training specific to the respirator that is being assigned must be completed prior to or at the time of fit testing by EH&S. Procedures requiring respirator use will be evaluated on a case-by-case basis to determine if additional workspace or site specific training is also needed.

Respirator users will be retrained annually or as needed, if they change departments, or need to utilize a different respirator. The Respiratory Protection Program Administrator or designated EH&S personnel will document training and fit test information noting the make, model, and size of the respirator for which each employee has been trained and fit tested.

Respirator training will cover the following topics:

- USF's Respiratory Protection Program
- The OSHA Respiratory Protection Standard
- Respirator requiring airborne contaminant hazards encountered at USF and their health effects
- Proper selection and use of respirators
- Limitations of respirators
- Demonstration/practice of respirator donning and user seal checks
- Respirator failure and emergency procedures
- Fit testing process
- Change-out schedules
- Proper maintenance and storage of respirators
- Inspection of respirators for defects, cracks, and/or tears
- Any conditions limiting the effective use of respirators

5.0 Program Evaluation

USF's Respiratory Protection Program Administrator will be responsible for evaluating this respiratory protection program and making any changes deemed necessary. Periodic evaluations of areas using respiratory protection will also be conducted to ensure this respiratory protection program is being implemented.

6.0 Documentation and Recordkeeping

A written copy of this respiratory protection program will be kept on file in USF's Respiratory Protection Program Administrator's office and will be made available to any employees, volunteers, and students for review. A copy of the respiratory protection program will be available on the USF EH&S website.

Electronic copies of training, fit test records, and voluntary use forms will be retained by the EH&S department. Respirator Medical Questionnaire information and physician's or other licensed healthcare professional's findings will be kept with the evaluating entity and will remain confidential. The university will only retain the physician's or other licensed healthcare professional's recommendation regarding each employee's ability to wear a respirator.

Appendix A
Respirator Qualitative Fit
Test Record

Respirator Fit Test Record

Today's Date: _____

Next Fit Test Due Date: _____

A. Respirator Wearer Information

Name:	
Job Title:	
Department/College:	PI/Supervisor: (optional)
User Signature:	

Campus Location: _____

B. Respirator Type

Manufacturer/Model	Type	Size
Check here to assign loose fitting Powered Air Purifying Respirator (PAPR):		

Type of Filters/Cartridges Used: _____

C. Respiratory Hazards Encountered: _____

D. User Seal Checks Successfully Demonstrated:

Negative Pressure: Yes No

Positive Pressure: Yes No

E. Fit-Test Hood Used: Yes No

F. Testing Material Used: Saccharin Bitrex

Was testing material detected during the following activities?

Activity	Yes	No
Normal breathing		
Deep breathing		
Turning head side to side		
Moving head up and down		
Talking		
Smiling/Frowning		

Was Employee instructed on the proper use, maintenance, storage, and cleanliness of the respirator?

Yes No

Fit Test Results:

Pass Fail (Note: all activity results have to be "No" to pass)

Testing performed by:

Printed Name: _____ Signature: _____

APPENDIX B

Request for Medical Clearance for Respirator Use

**UNIVERSITY OF SOUTH FLORIDA
REQUEST FOR MEDICAL CLEARANCE FOR RESPIRATOR USE**

Name: _____ EID#: _____ Date of Birth: _____

Position (Title): _____ Supervisor: _____

Department: _____ Campus: _____

Work Phone: _____

Check Type(s) of Respirator(s) to be used:

____ N, R, or P disposable respirator (filter-mask, non-cartridge type only)

____ Half-mask air purifying respirator (non-powered) _____ Full-facepiece air purifying respirator (non-powered)

____ Other respirator, specify type: _____

Check Level of Work Effort While Wearing Respirator:

____ Light ____ Medium ____ Heavy

Check Extent of Respirator Use:

____ Daily ____ Occasionally, but more than once a week ____ Rarely or for emergency use only

Typical Length of Respirator Use in Hours/Minutes: _____/_____

Special work considerations (i.e., high places, temperature, humidity, hazardous materials, protective clothing, etc.):

Supervisor's Signature

Date

Physician's / Licensed Healthcare Professional's Statement

The employee (check only one):

____ Requires further medical evaluation

____ May use respirator(s) without restrictions

____ May use respirator(s) with restrictions (see below)

____ May not use respirator(s)

Restrictions (if any):

Signature of Physician / Other Licensed Healthcare Professional

Date

Return completed form to USF Environmental Health & Safety at ehs@usf.edu

APPENDIX C
Respirator Medical
Questionnaire

RESPIRATOR MEDICAL QUESTIONNAIRE

Appendix C to Sec. 1910.134: OSHA Respirator Medical Evaluation Questionnaire (Mandatory)

To the employer:

Answers to questions in Section 1, and to question 9 in Section 2 of Part A, do not require a medical examination.

To the employee:

Your employer must allow you to answer this questionnaire during normal working hours, or at a time and place that is convenient to you. To maintain your confidentiality, your employer or supervisor must not look at or review your answers, and your employer must tell you how to deliver or send this questionnaire to the health care professional who will review it.

Part A. Section 1. (Mandatory)

The following information must be provided by every employee who has been selected to use any type of respirator (please print).

1. Today's date: _____
2. Your name: _____
3. Your age (to nearest year): _____
4. Sex (circle one): Male/Female
5. Your height: _____ ft. _____ in.
6. Your weight: _____ lbs.
7. Your job title: _____
8. A phone number where you can be reached by the health care professional who reviews this questionnaire (include the Area Code): _____
9. The best time to phone you at this number: _____
10. Has your employer told you how to contact the health care professional who will review this questionnaire (circle one): Yes/No
11. Check the type of respirator you will use (you can check more than one category):
 - a. _____ N, R, or P disposable respirator (filter-mask, non-cartridge type only).
 - b. _____ other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus).
12. Have you worn a respirator (circle one): Yes/No

If "yes," what type(s): _____

Part A. Section 2. (Mandatory)

Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator (please circle "yes" or "no").

1. Do you currently smoke tobacco, or have you smoked tobacco in the last month: Yes/No
2. Have you ever had any of the following conditions?
 - a. Seizures: Yes/No
 - b. Diabetes (sugar disease): Yes/No
 - c. Allergic reactions that interfere with your breathing: Yes/No
 - d. Claustrophobia (fear of closed-in places): Yes/No
 - e. Trouble smelling odors: Yes/No
3. Have you ever had any of the following pulmonary or lung problems?
 - a. Asbestosis: Yes/No
 - b. Asthma: Yes/No
 - c. Chronic bronchitis: Yes/No
 - d. Emphysema: Yes/No
 - e. Pneumonia: Yes/No
 - f. Tuberculosis: Yes/No
 - g. Silicosis: Yes/No
 - h. Pneumothorax (collapsed lung): Yes/No
 - i. Lung cancer: Yes/No
 - j. Broken ribs: Yes/No
 - k. Any chest injuries or surgeries: Yes/No
 - l. Any other lung problem that you've been told about: Yes/No
4. Do you currently have any of the following symptoms of pulmonary or lung illness?
 - a. Shortness of breath: Yes/No
 - b. Shortness of breath when walking fast on level ground or walking up a slight hill or incline: Yes/No
 - c. Shortness of breath when walking with other people at an ordinary pace on level ground: Yes/No
 - d. Have to stop for breath when walking at your own pace on level ground: Yes/No
 - e. Shortness of breath when washing or dressing yourself: Yes/No
 - f. Shortness of breath that interferes with your job: Yes/No
 - g. Coughing that produces phlegm (thick sputum): Yes/No
 - h. Coughing that wakes you early in the morning: Yes/No

- i. Coughing that occurs mostly when you are lying down: Yes/No
- j. Coughing up blood in the last month: Yes/No
- k. Wheezing: Yes/No
- l. Wheezing that interferes with your job: Yes/No
- m. Chest pain when you breathe deeply: Yes/No
- n. Any other symptoms that you think may be related to lung problems: Yes/No

5. Have you ever had any of the following cardiovascular or heart problems?

- a. Heart attack: Yes/No
- b. Stroke: Yes/No
- c. Angina: Yes/No
- d. Heart failure: Yes/No
- e. Swelling in your legs or feet (not caused by walking): Yes/No
- f. Heart arrhythmia (heart beating irregularly): Yes/No
- g. High blood pressure: Yes/No
- h. Any other heart problem that you've been told about: Yes/No

6. Have you ever had any of the following cardiovascular or heart symptoms?

- a. Frequent pain or tightness in your chest: Yes/No
- b. Pain or tightness in your chest during physical activity: Yes/No
- c. Pain or tightness in your chest that interferes with your job: Yes/No
- d. In the past two years, have you noticed your heart skipping or missing a beat: Yes/No
- e. Heartburn or indigestion that is not related to eating: Yes/No
- d. Any other symptoms that you think may be related to heart or circulation problems: Yes/No

7. Do you currently take medication for any of the following problems?

- a. Breathing or lung problems: Yes/No
- b. Heart trouble: Yes/No
- c. Blood pressure: Yes/No
- d. Seizures: Yes/No

8. If you've used a respirator, have you ever had any of the following problems? (If you've never used a respirator, check the following space and go to question 9:) _____

- a. Eye irritation: Yes/No
- b. Skin allergies or rashes: Yes/No
- c. Anxiety: Yes/No
- d. General weakness or fatigue: Yes/No
- e. Any other problem that interferes with your use of a respirator: Yes/No

9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire: Yes/No

Questions 10 to 15 below must be answered by every employee who has been selected to use either a full-facepiece respirator or a self-contained breathing apparatus (SCBA). For employees who have been selected to use other types of respirators, answering these questions is voluntary.

10. Have you ever lost vision in either eye (temporarily or permanently): Yes/No

11. Do you currently have any of the following vision problems?

- a. Wear contact lenses: Yes/No
- b. Wear glasses: Yes/No
- c. Color blind: Yes/No
- d. Any other eye or vision problem: Yes/No

12. Have you ever had an injury to your ears, including a broken ear drum: Yes/No

13. Do you currently have any of the following hearing problems?

- a. Difficulty hearing: Yes/No
- b. Wear a hearing aid: Yes/No
- c. Any other hearing or ear problem: Yes/No

14. Have you ever had a back injury: Yes/No

15. Do you currently have any of the following musculoskeletal problems?

- a. Weakness in any of your arms, hands, legs, or feet: Yes/No
- b. Back pain: Yes/No
- c. Difficulty fully moving your arms and legs: Yes/No
- d. Pain or stiffness when you lean forward or backward at the waist: Yes/No
- e. Difficulty fully moving your head up or down: Yes/No
- f. Difficulty fully moving your head side to side: Yes/No
- g. Difficulty bending at your knees: Yes/No
- h. Difficulty squatting to the ground: Yes/No
- i. Climbing a flight of stairs or a ladder carrying more than 25 lbs: Yes/No
- j. Any other muscle or skeletal problem that interferes with using a respirator: Yes/No

Part B (at discretion of the health care professional)

Any of the following questions, and other questions not listed, may be added to the questionnaire at the discretion of the health care professional who will review the questionnaire.

1. In your present job, are you working at high altitudes (over 5,000 feet) or in a place that has lower than normal amounts of oxygen: Yes/No

If "yes," do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you're working under these conditions: Yes/No

2. 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: Yes/No

If "yes," name the chemicals if you know them: _____

3. Have you ever worked with any of the materials, or under any of the conditions, listed below:

- a. Asbestos: Yes/No
- b. Silica (e.g., in sandblasting): Yes/No
- c. Tungsten/cobalt (e.g., grinding or welding this material): Yes/No
- d. Beryllium: Yes/No
- e. Aluminum: Yes/No
- f. Coal (for example, mining): Yes/No
- g. Iron: Yes/No
- h. Tin: Yes/No
- i. Dusty environments: Yes/No
- j. Any other hazardous exposures: Yes/No

If "yes," describe these exposures: _____

4. List any second jobs or side businesses you have: _____

5. List your previous occupations: _____

6. List your current and previous hobbies: _____

7. Have you been in the military services? Yes/No

If "yes," were you exposed to biological or chemical agents (either in training or combat): Yes/No

8. Have you ever worked on a HAZMAT team? Yes/No

9. Other than medications for breathing and lung problems, heart trouble, blood pressure, and seizures mentioned earlier in this questionnaire, are you taking any other medications for any reason (including over-the-counter medications): Yes/No

If "yes," name the medications if you know them: _____

10. Will you be using any of the following items with your respirator(s)?

- a. HEPA Filters: Yes/No
- b. Canisters (for example, gas masks): Yes/No
- c. Cartridges: Yes/No

11. How often are you expected to use the respirator(s) (circle "yes" or "no" for all answers that apply to you)?:

- a. Escape only (no rescue): Yes/No
- b. Emergency rescue only: Yes/No
- c. Less than 5 hours per week: Yes/No
- d. Less than 2 hours per day: Yes/No
- e. 2 to 4 hours per day: Yes/No
- f. Over 4 hours per day: Yes/No

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

a. Light (less than 200 kcal per hour): Yes/No

If "yes," how long does this period last during the average shift: _____ hrs. _____ mins.

Examples of a light work effort are sitting while writing, typing, drafting, or performing light assembly work; or standing while operating a drill press (1-3 lbs.) or controlling machines.

b. Moderate (200 to 350 kcal per hour): Yes/No

If "yes," how long does this period last during the average shift: _____ hrs. _____ mins.

Examples of moderate work effort are sitting while nailing or filing; driving a truck or bus in urban traffic; standing while drilling, nailing, performing assembly work, or transferring a moderate load (about 35 lbs.) at trunk level; walking on a level surface about 2 mph or down a 5-degree grade about 3 mph; or pushing a wheelbarrow with a heavy load (about 100 lbs.) on a level surface.

c. Heavy (above 350 kcal per hour): Yes/No

If "yes," how long does this period last during the average shift: _____ hrs. _____ mins.

Examples of heavy work are lifting a heavy load (about 50 lbs.) from the floor to your waist or shoulder; working on a loading dock; shoveling; standing while bricklaying or chipping castings; walking up an 8-degree grade about 2 mph; climbing stairs with a heavy load (about 50 lbs.).

13. Will you be wearing protective clothing and/or equipment (other than the respirator) when you're using your respirator: Yes/No

If "yes," describe this protective clothing and/or equipment: _____

14. Will you be working under hot conditions (temperature exceeding 77 deg. F): Yes/No

15. Will you be working under humid conditions: Yes/No

16. Describe the work you'll be doing while you're using your respirator(s):

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

18. 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: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of the second toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of the third toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

The name of any other toxic substances that you'll be exposed to while using your respirator:

19. Describe any special responsibilities you'll have while using your respirator(s) that may affect the safety and well-being of others (for example, rescue, security):

APPENDIX D
Voluntary Use Form

Respirator Voluntary Use Form (*Individuals Using Filtering Facepiece Respirators When Not Required*)

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

- ✓ You agree to only use a filtering facepiece type of respirator (e.g., N-95) on a voluntary basis. If you need to use a tight-fitting, elastomeric-type of respirator (e.g. half-face, full face, PAPR, etc.), then all requirements of the respiratory protection program will need to be followed.
- ✓ Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator's limitations.
- ✓ Before donning, ensure filtering facepiece to be used is not dirty or contaminated.
- ✓ Filtering facepiece use must not be used if it interferes with the ability to work in a safe manner.
- ✓ Only choose NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services certified respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
- ✓ Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
- ✓ Keep track of your respirator so that you do not mistakenly use someone else's respirator.
- ✓ If you feel faint or dizzy while using a respirator, discontinue use and seek medical attention immediately.

Respirators are not required for my employment, task, experiment, or work process. I want to wear one voluntarily. I have read the statement above and have been given a copy of this Respirator Voluntary Use Form by EH&S.

Name (Print)

Signature

Date

USF EHS Employee Name Issuing Copy of Form

Area/Process Evaluated

APPENDIX E

OSHA Respiratory Protection Standard

29 CFR 1910.134

OSHA Respiratory Protection Standard

Contact EH&S for a hard copy of the Respiratory Protection Standard, 29 CFR 1910.134, or visit the following link below on the OSHA website:

<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134>