ENVIRONMENTAL HEALTH & SAFETY RESPIRATORY PROTECTION PROGRAM

Rev. 5/2019

TABLE OF CONTENTS

Appendices:

Refer to **Section 7 --** electronic links for **Appendices A-D** are provided.

Appendix E: PDF of the University's Respirator Voluntary Use Form

Appendix F: PDF of the University's Respirator Fit Test Form.

1.0 Purpose

The University of Delaware has determined that employees and in certain cases, graduate and undergraduate students, in various departments are exposed to respiratory hazards during routine and emergency operations. These hazards include wood dust, particulates, vapors, compressed gases, etc. and in some cases represent Immediately Dangerous to Life or Health (IDLH) conditions. The purpose of this program is to ensure that all University of Delaware employees and in certain circumstances students are protected from exposure to these respiratory hazards as prescribed in the Occupational Safety and Health Administration's (OSHA) Respiratory Protection Standard- 29 CFR 1910.134.

Engineering controls, such as ventilation and substitution of less toxic materials, are the first line of defense at the University of Delaware; however, engineering controls have not always been feasible for some of our operations, or have not always completely controlled the identified hazards. In these situations, respirators and other protective equipment must be used. Respirators are also needed to protect employees' health during emergencies. The work processes requiring respirator use at the University of Delaware are outlined in **Table 1** in the Scope and Application section of this program.

In addition, some employees have expressed a desire to wear respirators during certain operations that do not require respiratory protection. As a general policy, the University of Delaware will review each of these requests on a case-by-case basis. If the use of respiratory protection in a specific case will not jeopardize the health or safety of the worker(s), the University of Delaware will not provide respirators for voluntary use. As outlined in the Scope and Application section of this program, voluntary respirator use is subject to certain requirements of this program.

2.0 Scope and Application

This program applies to all employees, and in some cases students, who are required to wear respirators during normal work operations, and during some non-routine or emergency operations such as a spill of a hazardous substance.

In addition, any employee who voluntarily wears a respirator when a respirator is not required (i.e., in certain maintenance and coating operations) is subject to the medical evaluation, cleaning, maintenance, and storage elements of this program, and must be provided with certain information specified in this section of the program.[1]

Employees participating in the respiratory protection program do so at no cost to them. The expense associated with training, medical evaluations and respiratory protection equipment will be borne by the University

[1] Employees who voluntarily wear filtering face pieces (*dust masks*) are **not** subject to the medical evaluation, cleaning, storage, and maintenance provisions of this program.

3.0 Responsibilities

Employees and students are to inform their supervisor or Program Administrator of any respiratory hazards that they feel are not adequately addressed in the workplace and of any other concerns that they have regarding the program.

Program Administrator

Program Administrator is responsible for administering the respiratory protection program. Duties of the Program Administrator include:

- Identifying work areas, processes or tasks that require workers to wear respirators, and evaluating hazards.
- Selection of respiratory protection options.
- Monitoring respirator use to ensure that respirators are used in accordance with their certifications.
- Arranging for and/or conducting training.
- Ensuring proper storage and maintenance of respiratory protection equipment.
- Conducting qualitative fit testing or quantitative fit testing per 29 CFR 1910.134.
- Administering the medical surveillance program.
- Maintaining records required by the program.
- Evaluating the program.
- Updating the written program, as needed.

The Director of the Environmental Health and Safety Office or his/her designee will be the Program Administrator.

Supervisors

Supervisors are responsible for ensuring that the respiratory protection program is implemented in their particular areas. In addition to being knowledgeable about the program requirements for their own protection, supervisors must also ensure that the program is understood and followed by the employees under their charge. Duties of the supervisor include:

- Ensuring that employees under their supervision (including new hires) have received appropriate training, fit testing, and medical evaluations.
- Ensuring the availability of appropriate respirators and accessories.
- Being aware of tasks requiring the use of respiratory protection.
- Enforcing the proper use of respiratory protection when necessary.
- Ensuring that respirators are properly cleaned, maintained, and stored according to the respiratory protection plan.
- Ensuring that respirators fit well and do not cause discomfort.
- Continually monitoring work areas and operations to identify respiratory hazards.
- Coordinating with the Program Administrator on how to address respiratory hazards or other concerns regarding the program.

Employees

Each employee has the responsibility to wear his or her respirator when and where required and in the manner in which they were trained. Employees must also:

- Care for and maintain their respirators as instructed, and store them in a clean sanitary location.
- Inform their supervisor if the respirator no longer fits well, and request a new one that fits properly.

Table 1: **University of Delaware Departments Using Respirators and Hazard Assessment**

Department/Process	Respirator Hazard	Respirator	V/R*	Cartridge ** Change Schedule
Ag/ Ag Engineering (Pesticide Application)	Dusts, Pesticide Aerosols, Vapors	1/2 or Full Face APR OV &P100	V/R	1X/Month
Allen Lab (Decon)	Formaldehyde Vapor, Possible IDLH	Full Face APR HCHO SCBA	R	4X/Year
Animal Care Tech. and Animal users	Animal Allergens	N95 Disposable	R	1X/Shift or Visit
CCM (Mixing Styrene and Accelerator)	Various Dusts, Fibers, Organics	1/2 Face or Full Face APR , OV & P100	V/R	1X/Month
Custodial (General Cleaning, Mold Abatement)	Household Dust, Mold	N95 Disposable	V/R	1X/Shift
Farm (Pesticide Application)	Dusts, Welding Fumes, Pesticide Aerosols & Vapors	1/2 Face or Full Face APR, OV & P100	V/R	1X/Month
Farm PLSC/Greenhouse (Pesticide Application)	Dusts, Pesticide Aerosols & Vapors	1/2 Face or, Full Face APR OV, P100, N95 Disposable	V/R	1X/Month; 1X/Shift

Georgetown Research Education Center (Changing Chicken Houses, Respond to O_2 Deficiency Alarm)	Dusts, Ammonia, Pesticide Aerosols & Vapors, O_2 Def, IDLH	1/2 and Full Face APR with OV & P100, Ammonia & N95 SCBA, N95 Disposable	V/R	1X/Month 1XShift/Visit
Grounds (Pesticide	Dusts, Allergens, Pesticide	1/2 or Full Face APR OV& P100	V/R	1X/Month

Pest Control (Pesticide Application)	Dusts, Pesticide Aerosols & Vapors	1/2 or Full Face APR with OV & P100	V/R	1X/Month
HVAC (Work on Hazardous Exhaust Systems)	Potential Mixed Dust, Aerosols, Vapors & Gases, Emergency CFC Alarm	1/2 or Full Face APR with OV & P100 Cartridge	R	1X/Month
IEC (Load and Unload Substrates)	Dusts, Heavy Metals Aerosols, Gases & Vapors	1/2 Face APR, OV & P100 Cartridges	V/R	1X/Month
Insulation Shop (Asbestos and Mold Abatement)	Dusts, Lead, Asbestos, Fiberglass, Mold	1/2 Face APR, P100 Full Face PAPR P100	V/R	2X/Month
Lewes (Pesticide Application, Painting/Sanding)	Lead, Dusts, Asbestos, Pesticide Aerosols & Vapor	1/2 Face APR with OV & N95, P100 for Asbestos and Lead	V/R	1X/Month
Lewes RV Sharp (Painting, Sanding & Welding)	Lead, Dusts, Asbestos, Pesticide Aerosol & Vapors	1/2 Face or Full Face APR with OV & N95, P100 Lead	V/R	1X/Month

Library (Cleaning Mold from Collections)	Dusts, Mold	N95 Disposable	V/R	1X/Shift
EHS (Responding to Unknown Chemical Spills, Asbestos, Mold	All Emergency Response	1/2 or Full Face APR, With OV, P100 SCBA, N95	R	1X/Month
EHS	Bulking Chemicals	Full Face APR, With OV & P100	R	Weekly
Art Conservation (Winterthur)	Heavy Metals, Dust, Solvent Vapors, Mold	1/2 or Full Face APR With OV & P100,	V/R	1X/Month

Paint Shop (Painting, Sanding)	Dusts, Solvents, Paints, Lead	1/2 and Full Face APR with OV & P100	V/R	1X/Month
Structure Shop (includes roofing)	Dusts, Solvents, Possible Crystalline Silica	1/2 and Full Face APR with OV & P100	V/R	1X/Month
Student Health Services (Treating Possible Case of TB)	Airborne Infectious Diseases	N95 Disposable	R	Isolation Per Visit otherwise 1X/Shift
UDECU	Airborne Infectious Diseases	N95 Disposable	R	During treatment and transport

Nanofab, COE, IEC, Highly Toxic Compressed Gases	Inhalation of toxic gases – catastrophic release	SCBA	R	NA
COE- Collecting Material and cleaning equipment	Aerosols and vapors (As, Carbon Nanofibers)	1/2 or Full Face APR OV & P100	R	1X/Month

Legend:* In many cases, the Voluntary versus Required Classification is made through a specific job hazard assessment for a particular.
** N95 Prefilters should be changed daily or more frequently as required.
APR – denotes air purifying respirator which includes disposable N95, P100, etc.
V-denotes voluntary use
R- denotes required use
OV- organic vapor cartridge
NA – Not applicable

4.0 Program Elements

Selection Procedures

Program Administrator will select respirators to be used on site, based on the hazards to which workers are exposed and in accordance with all OSHA Standards. Program Administrator will conduct a hazard evaluation for each operation, process, or work area where airborne contaminants may be present in routine operations or during an emergency.

The hazard evaluation will include:

1) Identification and development of a list of hazardous substances used in the workplace, by department or work process.

2) Review of work processes to determine where potential exposures to these hazardous substances may occur. This review shall be conducted by surveying the workplace, reviewing process records, and talking with employees and supervisors.

3) Exposure monitoring to quantify potential hazardous exposures. Monitoring if required, will be conducted by or arranged for by the University's Department of Environmental Health and Safety (DEHS).

Updating the Hazard Assessment

The Program Administrator must revise and update the hazard assessments as needed (i.e., any time work process changes may potentially affect exposure). If an employee feels that respiratory protection is needed during a particular activity, he/she is to contact his or her supervisor or Program Administrator. The Program Administrator will evaluate the potential hazard, arranging for outside assistance as

necessary. The Program Administrator will then communicate the results of that assessment back to the employees. If it is determined that respiratory protection is necessary, all other elements of this program will be in effect for those tasks. This program will be updated accordingly.

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. Also, all filters, cartridges, and canisters must be labeled with the appropriate NIOSH approval label. The label must not be removed or defaced while it is in use.

Medical Evaluation

Employees who are either required to wear respirators, or who choose to wear an APR voluntarily, must pass a medical exam before being permitted to wear a respirator on the job. Employees are not permitted to wear respirators until a physician has determined that they are medically able to do so. Any employee refusing the medical evaluation will not be allowed to work in an area requiring respirator use.

A licensed physician or physician's assistant at an EHS selected provider or personal physician will provide the medical evaluations. Medical evaluation procedures are as follows:

- The medical evaluation will be conducted using the questionnaire provided in the OSHA Respiratory Protection Standard noted in Appendix C of the standard. The Program Administrator will provide a copy of this questionnaire to all employees requiring medical evaluations.
- To the extent feasible, the company will assist employees who are unable to read the questionnaire (by providing help in reading the questionnaire). When this is not possible, the employee will be sent directly to the physician for medical evaluation.
- All affected employees will be given a copy of the medical questionnaire to fill out. Employees will be permitted to fill out the questionnaire on company time.
- Follow-up medical exams will be granted to employees as required by the Standard, and/or as deemed necessary by the medical provider.
- All employees will be granted the opportunity to speak with the physician about their medical evaluation, if they so request.
- The Program Administrator will provide the medical provider with a copy of this program, a copy of the Respiratory Protection Standard, the list of hazardous substances by work area, and for each employee requiring evaluation: his or her work area or job title, proposed respirator type and weight, length of time required to wear respirator, expected physical work load (light, moderate, or heavy), potential temperature and humidity extremes, and any additional protective clothing required.
- Any employee required for medical reasons to wear a positive pressure air purifying respirator will be provided with a powered air purifying respirator (PAPR).
- After an employee has received clearance and begun to wear his or her respirator, additional medical evaluations will be provided under the following circumstances.
    - Employee reports signs and/or symptoms related to their ability to use a respirator, such as shortness of breath, dizziness, chest pains, or wheezing;
    - The medical provider informs the Program Administrator that the employee needs to be reevaluated;
    - Information from this program, including observations made during fit testing and

program evaluation, indicates a need for reevaluation;
- A change occurs in workplace conditions that may result in an increased physiological burden on the employee.

All examinations and questionnaires are to remain confidential between the employee and the physician. The frequencies of re-evaluations will be based on those dictated by other regulations and recommendations from the University's authorized Licensed Healthcare Provider (LHCP)

Voluntary Respirator Use

The University of Delaware will provide respirators at no charge to employees for voluntary use if approved by Program Administrator.

The Program Administrator will provide all employees who voluntarily choose to wear respirators with a copy of Appendix D of the standard which details the requirements for voluntary use of respirators by employees. Employees must read and sign a copy which will be placed in their personnel file. Employees choosing to wear a half -facepiece APR must comply with the procedures for Medical Evaluation, Respirator Use, and Cleaning, Maintenance and Storage.

The Program Administrator shall authorize voluntary use of respiratory protective equipment as requested on a case-by-case basis, depending on specific workplace conditions and the results of the medical evaluations where appropriate.

Fit Testing

Fit testing is required for all employees and students required to wear a respirator. All employees who are required to wear any respirator will be fit tested:

- Prior to being allowed to wear any respirator with a tight fitting facepiece.
- Annually.
- When there are changes in the employee's physical condition that could affect respiratory fit (e.g., obvious change in body weight, facial scarring, major dental work affecting facial features, etc.).

Employees will be fit tested with the make, model, and size of respirator that they will actually wear. Employees will be provided with several models and sizes of respirators so that they may find an optimal fit. Fit testing of tight fitting PAPRs is to be conducted in the negative pressure mode.

The Program Administrator or his/her designee will conduct fit tests following the OSHA approved methods for Qualitative/Quantitative Fit Test as outlined in Appendix A of the Respiratory Protection Standard.

Respirator Use

General Use Procedures:

- Employees will use their respirators under conditions specified by this program, and in accordance with the training they receive on the use of each particular model. In addition, the respirator shall not be used in a manner for which it is not certified by NIOSH or by its manufacturer.

- All employees shall conduct user seal checks each time that they wear their respirator. Employees shall use either the positive or negative pressure check (depending on which test works best for them) specified in the Respiratory Protection Standard

- All employees shall be permitted to leave the work area to go to the locker room to maintain their respirator for the following reasons: to clean their respirator if the respirator is impeding their ability to work, change filters or cartridges, replace parts, or to inspect respirator if it stops functioning as intended. Employees should notify their supervisor before leaving the area.

- Employees are not permitted to wear tight-fitting respirators if they have any condition, such as facial scars, facial hair, or missing dentures, that prevents them from achieving a good seal. Employees are not permitted to wear headphones, jewelry, or other articles that may interfere with the facepiece-to-face seal.

Emergency Procedures:

The following work areas have been identified as having foreseeable emergencies:

- All areas served by hazardous gas detection systems
- Chemical spills
- Fires

Respiratory protection in these instances is for emergency purposes only. University of Delaware employees are not trained as emergency responders, and are not authorized to act in such a manner. Exceptions: EHS Personnel and those University of Delaware employees (i.e., lab managers) that have current 40-hr HAZWOPER certification.

Respirator Malfunction:

1. Air-Purifying Respirator (APR) Malfunction:

For any malfunction of an APR (e.g., such as breakthrough, facepiece leakage, or improperly working valve), the respirator wearer should inform his or her supervisor that the respirator no longer functions as intended, and go to the designated safe area to maintain the respirator. The supervisor must ensure that the employee receives the needed parts to repair the respirator, or is provided with a new respirator.

2. Atmosphere-supplying Respirator Malfunction:

All workers wearing atmosphere-supplying respirators will work with a buddy. Buddies shall assist workers who experience an SAR malfunction to leave the hazardous location when a malfunction is signaled.

IDLH Procedures:

The Program Administrator has identified the following area as presenting the potential for IDLH conditions:

EHS responses, confined spaces, Allen Lab.

Air Quality

For supplied-air respirators, only Grade D breathing air shall be used in the cylinders. T h e Program Administrator will coordinate supplies of compressed air with the Chemical Hygiene Officer (CHO) and the company's vendor, and require testing to certify that the air in the cylinders meets the specifications of Grade D breathing air.

Cleaning, Maintenance, Change Schedules and Storage

Cleaning

Respirators issued for the exclusive use of an employee shall be cleaned as often as necessary, but at least once a day.

Atmosphere supplying and emergency use respirators are to be cleaned and disinfected after each use.

A. The following procedure is to be used when cleaning respirators:

- Disassemble respirator, removing any filters, canisters, or cartridges.
- Wash the facepiece and associate parts in a mild detergent with warm water. Do not use organic solvents.
- Rinse completely in clean warm water.
- Air dry in a clean area.
- Reassemble the respirator and replace any defective parts.
- Place in a clean, dry plastic bag or other airtight container.
- Refer to Appendix B-2 of the standard.

B. The following procedure is to be used for disinfection of respirators for common use:

Follow the procedures above substituting an approved product with both detergent and disinfecting properties.

Maintenance

Respirators are to be properly maintained at all times in order to ensure that they function properly and adequately protect the employee. Maintenance involves a thorough visual inspection for cleanliness and defects. Worn or deteriorated parts will be replaced prior to use. No components will be replaced or repairs made beyond those recommended by the manufacturer. Repairs to regulators or alarms of atmosphere-supplying respirators will be conducted by the manufacturer.

The following checklist will be used when inspecting respirators:

- Facepiece:
  cracks, tears, or holes;
  facemask distortion;
  cracked or loose lenses/faceshield

- Headstraps: breaks or tears; broken buckles

- Valves: residue or dirt; cracks or tears in valve material

- Filters/Cartridges: apprOVl designation; gaskets; cracks or dents in housing; proper cartridge for hazard

- Air Supply Systems: breathing air quality/grade; condition of supply hoses; hose connections; settings on regulators and valves

Employees are permitted to leave their work area to perform limited maintenance on their respirator in a designated area that is free of respiratory hazards. Situations when this is permitted include to wash their face and respirator facepiece to prevent any eye or skin irritation, to replace the filter, cartridge or canister, if they detect vapor or gas breakthrough or leakage in the facepiece, or if they detect any other damage to the respirator or its components.

Change Schedules

Employees wearing APRs or PAPRs with P100 filters for protection against wood dust and other particulates shall change the cartridges on their respirators when they first begin to experience difficulty breathing (i.e., resistance) while wearing their masks or there is reduced air-flow if a PAPR is used.

Based on discussions with our respirator distributor about the University of Delaware's exposure conditions, employees voluntarily wearing APRs with organic vapor cartridges shall change the cartridges on their respirators following the change out schedule listed in Table #1.

Storage

Respirators must be stored in a clean, dry area, and in accordance with the manufacturer's recommendations. Each employee will clean and inspect their own air-purifying respirator in accordance with the provisions of this program and will store their respirator in a plastic bag in their own locker. Each employee will have his/her name on the bag and that bag will only be used to store that employee's respirator.

The Program Administrator will store the University of Delaware's supply of respirators and respirator components in their original manufacturer's packaging in the equipment storage room.

Defective Respirators

Respirators that are defective or have defective parts shall be taken out of service immediately. If, during an inspection, an employee discovers a defect in a respirator, he/she is to bring the defect to the attention of his or her supervisor. Supervisors will give all defective respirators to the Program Administrator. The Program Administrator will decide whether to:

- Temporarily take the respirator out of service until it can be repaired.
- Perform a simple fix on the spot such as replacing a head-strap.
- Dispose of the respirator due to an irreparable problem or defect.

When a respirator is taken out of service for an extended period of time, the respirator will be tagged out of service, and the employee will be given a replacement of similar make, model, and size. All tagged out respirators will be kept in the EHS Lab for future disposal.

Training

The Program Administrator will provide training to respirator users and their supervisors on the contents of the University of Delaware's Respiratory Protection Program and their responsibilities under it, and on the OSHA Respiratory Protection Standard. Workers will be trained prior to using a respirator in the workplace. Supervisors will also be trained prior to using a respirator in the workplace or prior to supervising employees that must wear respirators.

The training course will cover the following topics:
- the University of Delaware's Respiratory Protection Program
- the OSHA Respiratory Protection Standard
- respiratory hazards encountered at the University of Delaware and their health effects
- proper selection and use of respirators
- limitations of respirators
- respirator donning and user seal (fit) checks
- fit testing
- emergency use procedures
- maintenance and storage
- medical signs and symptoms limiting the effective use of respirators

Employees will be retrained annually or as needed (e.g., if they change departments and need to use a different respirator). Employees must demonstrate their understanding of the topics covered in the training through hands-on exercises. A written test or online training may be used. Respirator training will be documented by the Program Administrator and the documentation will include the type, model, and size of respirator for which each employee has been trained and fit tested.

5.0 Program Evaluation

The Program Administrator will conduct periodic evaluations of the workplace to ensure that the provisions of this program are being implemented. The evaluations will include regular consultations with employees who use respirators and their supervisors, site inspections, air monitoring and a review of records.

Problems identified will be noted in an inspection log and addressed by the Program Administrator.

These findings will be reported to the University of Delaware's management, and the report will list plans to correct deficiencies in the respirator program and target dates for the implementation of those corrections.

6.0 Documentation and Recordkeeping

A written copy of this program and the OSHA Standard is kept in the Program Administrator's office and is available to all employees who wish to review it. Also maintained in the Program Administrator's office are copies of training and fit test records. These records will be updated as new employees are trained, as existing employees receive refresher training, and as new fit tests are conducted.

The Program Administrator will also maintain copies of the medical records for all employees covered under the respirator program. The completed medical questionnaire and the physician's documented findings are confidential and will remain at the designated medical provider. The company will only retain the physician's written recommendation regarding each employee's ability to wear a respirator.

7. References

- Respiratory Protection Standard -29 CFR 1910.134. https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_id=12716&p_table=standards
- Respirator Fit-Testing Protocol – 29 CFR 1910.134 Appendix A https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134AppA
- User Seal Check Procedures (Mandatory) -1910.134 Appendix. B-1. https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134AppB1
- Respirator Cleaning Procedures (Mandatory)- 1910.134 Appendix. B-2 https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134AppB2
- OSHA Respirator Medical Evaluation Questionnaire (Mandatory) Appendix C. https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134AppC
- Information for Employees Using Respirators When not Required Under Standard- (Mandatory) 29 CFR 1910.134 Appendix D. https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134AppD
- PDF of the University's Respirator Voluntary Use Form - **Appendix E**:
- University of Delaware's Fit Test Form – **Appendix F**

Appendix A

Respirator Fit-Testing Protocol – 29 CFR 1910.134 Appendix A
https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134AppA

Appendix B1 & B2

User Seal Check Procedures (Mandatory) -1910.134 Appendix. B-1.
https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134AppB1

Respirator Cleaning Procedures (Mandatory)- 1910.134 Appendix. B-2
https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134AppB2

Appendix C

Respirator Fit-Testing Protocol – 29 CFR 1910.134 Appendix A
https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134AppA

Appendix D

Information for Employees Using Respirators When not Required Under Standard- (Mandatory) 29 CFR 1910.134 Appendix D.

https://www.osha.gov/laws-egs/regulations/standardnumber/1910/1910.134AppD

Appendix E

University's Respirator Voluntary Use Form

Environmental Health & Safety
General Services Building
222 South Chapel Street
Newark, DE 19716-4150
Phone: 302-831-8475
Fax: 302-831-1528

Respiratory Protection
Appendix D to Sec. 29 CFR 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.

I have read and understand the above statement regarding my respirator use at the University of Delaware and will comply with the above listed requirements.

_____
Name (Print)

_____ _____
Signature Date

Appendix F

University's Respirator Fit Test Form

UNIVERSITY OF DELAWARE | Environmental Health & Safety

General Services Bldg.
222 South Chapel Street
Newark, DE 19716-4150
Phone: 302-831-8475
Fax: 302-831-1528

RESPIRATOR FIT TEST FORM

Name: _____ Facial Hair : Y___ N____

Department:_____ Phone #:_____

Email Address:_____

Respirator Size/ Type	Manufacturer/ Model #	Test Method— Qualitative	Respirator Fit Check		Testing Protocol	
		1-Saccharin Mist 2-Bitrex® 3-Isomamyl Acetate 4-Irritant Smoke	**Negative Pressure** P –Pass F-Fail	**Positive Pressure** P –Pass F-Fail	**Test**	**Results** P –Pass F-Fail
					Normal Breathing	
					Deep Breathing	
					Turn Head	
					Nod Head	
					Recite Rainbow Passage	
					Jog in Place	
					Normal Breathing	
					Normal Breathing	
					Deep Breathing	
					Turn Head	
					Nod Head	
					Recite Rainbow Passage	
					Jog in Place	
					Normal Breathing	

Name of Tester:_____ **Date:**_____

Employee Signature:_____ **Date:**_____

RAINBOW PASSAGE

WHEN THE SUNLIGHT STRIKES RAINDROPS IN THE AIR, THEY ACT LIKE A PRISM AND FORM A RAINBOW. THE RAINBOW IS A DIVISION OF WHITE LIGHT INTO MANY BEAUTIFUL COLORS. THESE TAKE THE SHAPE OF A LONG ROUND ARCH, WITH ITS PATH HIGH ABOVE, AND ITS TWO ENDS APPARENTLY BEYOND THE HORIZON. THERE IS, ACCORDING TO LEGEND, A BOILING POT OF GOLD AT ONE END. PEOPLE LOOK, BUT NO ONE EVER FINDS IT. WHEN A MAN LOOKS FOR SOMETHING BEYOND HIS REACH, HIS FRIENDS SAY HE IS LOOKING FOR THE POT OF GOLD AT THE END OF THE RAINBOW.