

UW Madison Respiratory Protection Program

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1.0 PURPOSE

The University of Wisconsin Madison is committed to providing a safe and healthy work environment for the campus community, inclusive of faculty, staff and students. The purpose of the respiratory protection program is to manage the safe use of respirators at University of Wisconsin facilities, in accordance with the Occupational Safety and Health Administration (OSHA) Respiratory Protection Standard 29 CFR 1910.134 as incorporated by WI SPS 332.15 and WI SPS 332.50.

This written program is designed to help work units comply with the written program requirements of the OSHA Respiratory Protection standard. Written program requirements will be considered complete when this document and applicable appendices are supplemented by completed Appendix A: Work Unit Hazard Assessment, and Appendix B: Authorized Users.

Occupational safety and health regulations mandate that employers implement and maintain a written management program to protect the safety and health of every employee that wears respiratory protection, 1) when respirator use is required to protect health, or 2) when mandated by the employer. To assure proper respirator use across campus, written programs are suggested for both required and voluntary respirator use. At minimum, a written hazard assessment (Respirator Appendix A), a list of authorized users (Respirator Appendix B), and OSHA's Voluntary Use Information (Respirator Appendix F) is required for voluntary respirator use.

2.0 PROCEDURES

The manager of each campus work unit with one or more employees who wear respiratory protection for any reason is chiefly responsible for ensuring the implementation, execution, and administration of the respiratory protection program within their own department. The Environmental & Occupational Health unit (EOH) provides guidance and assists department managers in meeting these program requirements. Failure to implement, execute, and administer the program where required may result in disciplinary and/or legal action against the responsible person(s).

The use of respirators is determined by work unit management based on the results of an initial hazard assessment of employee work tasks. The hazard assessment process should be initiated by the work unit by completing a department hazard assessment in Appendix A to this document. The Environmental & Occupational Health (EOH) unit staff will review the hazard assessment information to determine whether respirator use will be required for employee health protection. After completing the review, EOH will follow-up with the department point of contact to communicate the results of the review. When respirator use is required, EOH will provide the department with recommendations and additional guidance.

3.0 GLOSSARY

Authorized respirator user: An employee or student approved by work unit management to use a respirator.

Filtering face piece: 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 N-95 is considered a filtering facepiece respirator.

IDLH: Immediately dangerous to life or health.

Required use: The use of respirators in atmospheres with air contaminants known to be above allowable levels or where a supervisor or instructor has otherwise determined respirator use to be mandatory. Failure to use a respirator where required should subject an employee to discipline.

Tight fitting facepiece: A negative pressure respirator with a tight fitting facepiece made of elastomers such as rubber or silicone. Depending on the type of filter or cartridge used, may be used for vapor or particulates.

Voluntary use: The use of a respirator in atmospheres known to have contaminants that could affect the health of some individuals, but are not covered by, or do not exceed enforceable exposure levels, and for which use is not otherwise mandated. Voluntary use is only permitted when it has been determined that there is no airborne hazard that would require the use of a respirator.

4.0 RESPONSIBILITIES

4.1 Work Unit Director

The director of the department (Director) is responsible for compliance with respiratory protection rules. The director may assign responsibility for implementation and day-to-day operation of the respirator program to a designated Respirator Program Administrator. The identity of the RPA must be indicated in the work unit respirator plan (Appendix A.)

4.2 Work Unit Respirator Program Administrator (RPA)

The Respirator Program Administrator is a person qualified by appropriate training or experience that matches the complexity of the program.

The RPA administers, oversees and evaluates the department required respiratory protection program, including:

- Identifying work areas, processes or tasks that require workers to wear respirators, and evaluating hazards with assistance from Environmental and Occupational Health (EOH) and other campus resources such as Environment Health & Safety (EH&S).
- Ensuring adequate air quantity, quality, and flow of breathing air for atmosphere-supplying respirators.
- Selection of respirators, filters/cartridges, and cartridge change out schedules are appropriate based on hazard assessment.
- Arranging for and/or conducting training.
- Ensuring proper storage, cleaning, inspections, maintenance and use of respiratory protection equipment.
- Arranging for medical clearance and annual respirator fit testing.
- Maintaining records required by the program.
- Providing EOH an updated authorized respirator user list (Appendix B) at least annually.
- Evaluating the program, and updating the written program regularly.

4.3 Supervisors

Supervisors are responsible for ensuring 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 the program is understood and followed by the workers under their charge.

Supervisors shall:

- Ensuring employees under their supervision (including new hires) have received appropriate training, annual fit testing, and periodic medical evaluation.
- 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 respirators are properly cleaned, maintained, inspected, and stored according to the respiratory protection plan.
- Ensuring filter/cartridge change out schedules are being followed
- Ensuring 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.
- Ensuring adequate air quantity, quality, and flow of breathing air for atmosphere-supplying respirators.

4.4 Employees and Students

Employees and students shall:

- Wear their respirator when and where required and in the manner in which they were trained.
- 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.
- Inform their supervisor or the Program Administrator of any respiratory hazards that they feel
 are not adequately addressed in the workplace and of any other concerns they have regarding
 the program.
- Inform their supervisor of need for a medical reevaluation.

4.5 Instructors/Principal Investigators

Instructors and principal investigators shall assure employees and students under their supervision follow the respiratory protection program requirements.

4.6 Environmental & Occupational Health (EOH)

The Environmental & Occupational Health Program will:

- Support work unit hazard assessments
- Provide consultation as needed
- Periodically review the effectiveness of the department program
- Provide respirator fit testing

4.7 Occupational Medicine (unit of EOH)

The Occupational Medicine Program:

- Serves as the primary physician or other licensed healthcare professional (PLHCP) that
 determines if individuals are medically able to wear a respirator on the job. This is accomplished
 through the respirator medical evaluation questionnaire (RMEQ) and/or a medical exam when
 indicated.
- Collaborates with EOH for appropriate respirator selection based on hazards
- Maintain respirator medical clearance and fit test documentation in the electronic medical record

5.0 SFI FCTION OF RESPIRATORS

5.1 Hazard Survey

The RPA shall survey their work areas for respiratory hazards with the help of work unit supervisors and EOH. Hazard Assessments shall be documented in Appendix A: Work Unit Hazard Assessment.

5.2 Selection Criteria

Where hazard evaluation data indicates the need for respiratory protection, the department must provide the employee with an appropriate respirator model with the acceptable fit at no cost to the employee. Cost for student respirators shall be the student's responsibility.

All models of respirators used for employee health protection must be certified by the National Institute of Occupational Safety and Health (NIOSH). A sufficient number of respirator sizes and models must be provided to the employee during fit testing. Respirator selection shall be based on hazards the individual will be exposed to, and any other factors that may affect performance and reliability.

Selection and use of respirators for department employees include the following:

- Estimate of exposure hazard
- Chemical and physical form of contaminant
- Characteristics of hazardous operations or processes
- Location of hazardous areas
- Period of time which respiratory protection may be needed
- Activity of workers in the hazardous area and other required personal protective equipment
- Physical characteristics, capabilities, and limitations of various types of respirators
- Respirator protection factors and respirator fit

5.3 Limitations of Use

Department employees are only allowed to wear the specific make, model, and size of air purifying respirators for which they have been properly fitted, and when applicable, those that meet the appropriate change-out schedule for cartridges and filters. Department employees are prohibited from performing work in other areas where respiratory protection is required unless a hazard evaluation has been completed for the work.

Air purifying respirators shall not be used under the following conditions:

- Immediately Dangerous to Life and Health (IDLH) atmospheres.
- Oxygen deficient atmospheres (less than 19.5% oxygen).
- Situations where contaminants lack sufficient warning properties.
- Atmospheres containing unknown contaminants or concentrations.

 Atmospheres containing contaminant concentrations exceeding maximum use concentration of the respirator or cartridge.

Only self-contained breathing apparatus (SCBA) or airline respirators with an emergency escape supply shall be used to enter areas with unknown hazardous air contaminant concentration or in IDLH situations.

6.0 RESPIRATOR USE DURING ROUTINE AND EMERGENCY SITUATIONS

Respirators shall be put on before entering a work area with a hazardous atmosphere. Employees wearing tight fitting respirators must perform a successful user seal check using procedures from Appendix B 1 of OSHA's 29 CFR 1910.134 regulations or the respirator manufacturer each time they don the respirator. Employees wearing filtering facepiece respirators must perform a successful user seal check using procedures provided by the manufacturer. The respirator shall not be removed while in a hazardous atmosphere. Respirators shall not be worn when conditions prevent a good facepiece-to-face seal or interfere with valve function. Such conditions may be a growth of beard, sideburns, a skull cap that projects under the facepiece, temple pieces on glasses, goggles or other personal protective equipment, or the absence of one or both dentures. If during use the respirator fails or the air contaminant(s) is detected by the respirator user, he/she will leave the area immediately and not return until the respirator problem is corrected.

Employees wearing respirators in hazardous atmospheres must leave the required respirator use area for the following:

- 1. To wash face and respirator facepiece as necessary to prevent eye or skin irritation from use.
- 2. If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece.
- 3. To replace the respirator or filter, cartridge, or canister elements.

When a respirator user working in a hazardous atmosphere detects vapor or gas breakthrough, breathing resistance changes, or facepiece leakage, the user must exit the hazardous area. The department must replace or repair the respirator before the employee returns to the hazardous work area. Employees are not permitted to enter IDLH atmospheres, unknown hazardous atmospheres, or any hazardous atmosphere that exceeds the capability of their assigned respirators.

If during respirator use a change occurs in work conditions that could result in higher air contaminant levels, the employee will leave the contaminated area until the air contaminant concentration can be determined and the correct respirator provided.

The department must incorporate emergency and non-routine situations in Appendix A: Work Unit Hazard Assessment.

If airline respirators will be used, the department must add procedures to the written program. Contact EOH for assistance.

7.0 MAINTENANCE PROCEDURES, SERVICE LIFE AND CHANGE OUT SCHEDULES

Respirators will be regularly cleaned, disinfected, inspected, repaired, stored, and when necessary, discarded. General guides for the following procedures are found in Appendix C and D of this program. Supplement these general procedures with manufacturer specific requirements when necessary.

7.1 Cleaning and Disinfecting

Respirators will be cleaned and sanitized using procedures which follows protocols of <u>Appendix B 2 of OSHA's 29 CFR 1910.134 regulations</u>. Respirators used routinely will be inspected during cleaning and worn or deteriorated parts will be replaced.

7.2 Inspection

Respirators will be inspected before each use and after cleaning, checking respirator function, tightness of connections, condition of parts (including facepiece, head straps, valves, filtering elements), and for any deterioration or loss of pliability of elastomeric (e.g., rubber or silicone) parts.

7.3 Respirator Repairs

Respirators failing inspection or found defective shall be removed from service. Adjust, repair, or discard respirators using the following procedures:

- 1. Respirator repairs or adjustments are only done by properly trained personnel using parts designed for the respirator according to manufacturer's recommendations.
- 2. Discard respirators permanently removed from service so they do not return to service.

7.4 Storage

All respirators must be stored in a clean and sanitary location to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, damaging chemicals, and to prevent facepiece and exhalation valve deformation.

7.5 Service Life and Change Out Schedules

Filtering facepiece (disposable) respirators must be replaced based on manufacturer recommendations. Disposal is required when they become damaged, soiled or if increased breathing resistance is noted. Generally, disposal after no more than one day of use is recommended. The type of contaminant will also affect change out schedules. For example, oils can break down the filter material and infectious agents cannot be cleaned from a disposable respirator surface.

The service life of a cartridge is the length of time the absorbing material in a chemical cartridge is effective in keeping contaminants out of the respirator. To ensure that chemical cartridges are replaced before the service life ends, a cartridge change-out schedule must be developed. Change out schedules for cartridges must be established based on the contaminant, cartridge, duration, frequency, work rate, temperature, humidity, and concentration. Department specific change out schedules for each type of respirator used are listed in Appendix B. In the absence of a change-out schedule for specific operations, cartridges should be changed out at the end of each day or work shift. Contact EOH if assistance is needed to establish a change-out schedule.

8.0 TRAINING

Training is required prior to use in the workplace, annually, and more frequently if necessary to ensure safe respirator use. The RPA shall maintain records of employees who participate in respiratory protection training.

General respirator information is provided by EOH at the time of fit testing. Department specific training for all respirators must be provided by the department RPA or another qualified individual annually. Contact EOH if assistance is needed to establish a training program.

9.0 MFDICAL EVALUATION AND CLEARANCE

Prior to initial use, medical authorization to wear a respirator shall be required of every employee (faculty, staff, LTE, and student) that will be issued a respirator for required or voluntary use. Most medical evaluations will be conducted by Occupational Medicine. Any user of a respirator that is either required or voluntary, shall be enrolled in the UW Occupational Medicine Respiratory Protection Program. Enrollment is initiated when employees are identified on Appendix B: Authorized User form.

The medical clearance is accomplished through the respirator medical evaluation questionnaire (RMEQ) and/or a medical exam when indicated. Once the hazard assessment is complete and the list of authorized respirator users have been submitted to EOH, each authorized user shall obtain a respirator medical clearance by:

- 1. Complete Occupational Medicine release and consent forms in MyUHS
- 2. Complete Respirator Medical Evaluation Questionnaire in MyUHS
 - a. Additional medical information may be requested by the medical provider through MyUHS secure messaging or telephone.
 - b. In some cases, a physical exam will be required

10.0 FIT TESTING

The fit test is designed to verify the fit and comfort of tight fitting respirators, including filtering facepiece respirators i.e. N95s. Fit testing is not performed on loose fitting powered air purifying respirator (PAPR) hoods. All work unit employees issued a respirator will be fit tested using the same make, model, style and size respirator they will use.

Fit testing must be performed prior to initial use of a respirator, at least annually thereafter, and whenever conditions (such as employee's physical condition) change that could affect respirator fit. Examples of changes that could affect respirator fit are significant weight loss or gain, pregnancy, facial surgery, etc.

Once a respirator user has been medically cleared, they will be contacted by Occupational Medicine to schedule a quantitative fit test. During scheduling, users must provide the Departments' preferred type, manufacturer, and model of respirator. If the preferred respirator does not provide optimal fit, another respirator will be selected.

11.0 RECORDKEEPING

The RPA will maintain the following records:

- 1. Respirator user medical clearance approval
- 2. Records of annual fit tests
- 3. Respirator user training logs

- 4. Evaluations of program effectiveness (Appendix C)
- 5. A written copy of the current respirator program

Occupational Medicine will maintain records of medical clearance and fit testing in the electronic health record for each respirator user. The completed medical questionnaire and medical findings are confidential and will remain at Occupational Medicine. The employee's department will only receive and retain the medical clearance approval and fit testing record.

12.0 PROGRAM EVALUATIONS

The RPA will conduct periodic evaluations of the workplace to ensure the provisions of this program are being implemented. Evaluations shall include regular consultations with employees who use respirators and their supervisors, site inspections, air monitoring and a review of records. Issues identified during surveillance shall be documented and promptly corrected by the RPA.

A guide is found in Appendix C. If a change is noted that has the potential to increase employee exposure, the RPA will contact EOH to determine if protection modifications are necessary.

Appendix A: Work Unit Respiratory Protection Hazard Assessment						
The table below identifies tasks evaluated for respiratory hazards. Complete and return to the Environmental & Occupational Health Program at eoh@uhs.wisc.edu.						
		,	General Informat			
Work Unit:						
Respirator Program						
Administrator (RPA):						
RPA Email:						
Date of RPA Review:						
EOH Reviewer:						
Date of EOH Review:						
			Hazard Assessme	ent:		
TASK: Work Task description	LOCATION:	FREQUENCY: Daily, weekly,		HAZARDS: Known or suspected	CONTROLS: Protective	REQUIRED (R) or
(include occasional tasks such	Building/Room,		time to complete task	during task (chemicals, vapor,	measures currently in use	VOLUNTARY USE (V):
as cleaning and maintenance)	Outdoors, etc.	annually, etc.		fumes, biological aerosols,	(ventilation, respirator,	
				particulates, acids, caustics, etc.)	containment, none, etc.)	

Appendix B: Work Unit A	authorized Respirator (Jsers			
The table below lists employee nam			where respirator use is required or rec	commended, and change ou	ut frequency. Complete and return to
General Information:					
Work Unit:					
Respirator Program Administrator (RPA):					
RPA Email:					
Date of RPA Review:					
EOH Reviewer:					
Date of EOH Review:					
Respirators Stocked in Departmen	t:				
Respirator 1:	Manufacturer and Model #:				
Respirator 2:	Manufacturer and Model #:				
Respirator 3:	Manufacturer and Model #:				
Respirator 4:	Manufacturer and Model #:				
Respirator 5:	Manufacturer and Model #:				
Respirator 6:	Manufacturer and Model #:				
Employee Information:					
EMPLOYEE NAME:	EMAIL or WISC ID #:	WORK TASK DESCRIPTION(S): from Appendix A	RESPIRATOR TYPE(S): ex. disposable N95, half face or full face cartridge, PAPR	CARTRIDGE TYPE:	CARTRIDGE CHANGE OUT or DISPOSAL FREQUENCY:
			<u> </u>		
			<u> </u>		

Appendix B: Work Unit A	Authorized Respirator (Users			
The table below lists employee nar	mes, their job classification, type	of respirator, and the work task	where respirator use is required or re	commended, and change o	ut frequency. <i>Complete and return to</i>
the Environmental & Occupationa			·	· · · · · · · · · · · · · · · · · · ·	
General Information:					
Work Unit:					
Respirator Program Administrator					
(RPA):					
RPA Email:					
Date of RPA Review:					
EOH Reviewer:					
Date of EOH Review:					
Respirators Stocked in Departmen	nt:				
Respirator 1:	Manufacturer and Model #:				
Respirator 2:	Manufacturer and Model #:				
Respirator 3:	Manufacturer and Model #:				
Respirator 4:	Manufacturer and Model #:				
Respirator 5:	Manufacturer and Model #:				
Respirator 6:	Manufacturer and Model #:				
Employee Information:					
EMPLOYEE NAME:	EMAIL or WISC ID #:	WORK TASK DESCRIPTION(S):	RESPIRATOR TYPE(S): ex. disposable	CARTRIDGE TYPE:	CARTRIDGE CHANGE OUT or
		from Appendix A	N95, half face or full face cartridge, PAPR		DISPOSAL FREQUENCY:

Appendix C: Program Evaluation

The OSHA standard is performance-oriented and states the program shall be updated as necessary to reflect changes in workplace conditions and respirator use. The Department RPA is responsible for evaluation of respirator use in the workplace to ensure the provisions of this program are being implemented.

Frequency of program evaluation is based on the complexity and factors such as the hazard, types of respirator in use, variability of processes and operations, numbers of users, and worker experience. Program evaluation must be completed at least annually.

Person Completing Evaluation and Date of Evaluation:	

Program Element	Evaluation Criteria	Criteria Met?	Corrections Made (date, initials, explanation of correction)
Hazard Assessment Verification	 Hazard Assessment (Appendix A) up-to-date Significant changes to operations, processes, and materials must be evaluated by EOH. 	Y/N	
Respirator Use	 Any problems with use were corrected. Device is inspected before putting on. User seal checks performed when put on. Filters/cartridges/canisters appropriate for hazard. Each employee demonstrated proper care and use of respirator(s) 	Y/N	
Respirators Maintained	 Device is cleaned and sanitized. Device and accessories stored correctly. Filters/cartridges/canisters properly labeled. Filters/cartridges/canisters are not expired. 	Y/N	
Supplies are Adequate	 Inventory of respirators, spare parts, filters/cartridges, and cleaning materials adequate in number. Department stocks respirators and supplies that match the respirator each employee is fit tested in. 	Y/N	
Respirator Clearance Evaluations are Current	 Each employee has current medical clearance to wear a respirator. Medical clearance documentation is kept on file for each employee. 	Y/N	
Fit Tests are Current	 Each employee is fit tested annually for each respirator used. Fit test documentation is kept on file for each employee. 	Y/N	
Training is Current	 Training is performed on an annual basis. Each employee is trained for each type of respirator they use. The written program and OSHA rule are (29 CFR 1910.134) available for employee review. Training is documented. 	Y/N	

Appendix D: Guide for Using and Maintaining a Reusable Air Purifying Respirator

The following are general procedures for use and maintenance of reusable air purifying respirators. Departments can use these procedures provided they supplement them with more specific information provided by the manufacturer of the respirator that will be used.

Inspection

- 1. Inspect facepiece for:
 - cracks, tears, or holes
 - distortion (place the respirator "nose down" ("face seal up") on a clean surface and examine the face seal and face piece to determine if distortion has occurred)
 - cracked or broken air purifying element holders, badly worn threads, or worn or missing gaskets
 - cracked, scratched, or loose-fitting lens on full face models
- 2. Inspect head straps for:
 - breaks or tears
 - loss of elasticity
 - broken or malfunctioning buckles or attachments
- 3. Inspect inhalation and exhalation valves for:
 - cracks, tears, or distortion in valve material or valve seat
 - defects in exhalation valve cover
- 4. Inspect air purifying filters/cartridges for:
 - adequacy to protect against the hazard
 - worn filter and facepiece threads
 - cracks or dents in filter housing
 - end of service life indicator (if applicable)
 - legible NIOSH approved labels and color codes

Putting On (Donning)

- 1. Inspect respirator (see above)
- 2. Confirm that air purifying elements are those required to protect against air contaminants expected and that they are installed properly.
- 3. Place respirator facepiece on face with the chin properly located in chin pocket.
- 4. Position straps or harness on head per manufacturer's instructions and tighten straps to hold facepiece in place.
- 5. Adjust face piece for comfort and retighten straps/harness if required.

User Seal Checks

- 1. Perform positive user seal check by lightly placing the palm of the hand over exhalation valve cover and gently exhaling. A slight positive pressure should build up inside respirator. If any leakage is detected, readjust straps and repeat test until no leakage occurs.
- 2. Perform negative user seal check by placing the palms of the hands over the cartridges and gently inhaling. A slight negative pressure (suction) should occur inside respirator. If any leakage is detected, readjust straps and repeat test until no leakage occurs.

Removing (Doffing) Respirator

- 1. Loosen or unhook respirator straps/harness.
- 2. Remove facepiece from face.

Cleaning and Sanitizing

These procedures are provided for employer use when cleaning respirators. They are general in nature, and the employer as an alternative may use the cleaning recommendations provided by the manufacturer of the respirators used by their employees, provided such procedures are as effective as those listed here.

- 1. Remove filters, cartridges, or canisters. Disassemble facepiece by removing speaking diaphragms, demand and pressure-demand valve assemblies, or any components recommended by the manufacturer. Discard or repair any defective parts.
- 2. Wash components in warm water with a mild detergent or with a cleaner recommended by the manufacturer. A brush or cloth may be used to facilitate the removal of dirt.
- 3. Rinse components thoroughly in clean, warm, preferably running water. Drain.
- 4. When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:
 - Hypochlorite solution (50 ppm of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of warm water,
 - Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine to one liter of warm water; or,
 - Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.
- 5. Rinse components thoroughly in clean, warm, preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
- 6. Components should be hand dried with a clean lint free cloth or air dried.
- 7. Reassemble facepiece, replacing filters, cartridges, and canisters before next use, when necessary.
- 8. Test the respirator to ensure all components work properly.

Respirator Repairs

Adjust, repair, or discard respirators using the following procedures:

- 1. Respirators failing inspection or found defective will be removed from service. Discard respirators permanently removed from service so they do not return to service.
- 2. Employees must inform their supervisor or the RPA when they identify a defective respirator or part. The RPA will decide if the respirator can be repaired or must be disposed of due to an irreparable problem or defect.
- 3. Respirator repairs or adjustments are only done by properly trained personnel using NIOSH approved parts designed for the respirator and; repairs are made according to manufacturer's recommendations and specifications for type and extent of repairs to be performed; and when required, repairs are made by manufacturer or manufacturer trained technician.
- 4. If the employee is not given a replacement of the same make, model and size, then the employee must be fit tested in the new respirator prior to use.

Respirator Storage

- 1. Store respirators in a clean sealed container labeled with the employee name while not in use. Clean nylon duffel bags, large Ziploc plastic bags, or plastic totes are examples of acceptable storage containers.
- 2. Store in a clean, dry place. Do not distort rubber facepiece during storage.

Appendix E: General Guide for Using and Maintaining a PAPR

The following are general procedures for use and maintenance of powered air purifying respirators (PAPR). Departments can use these procedures provided they supplement them with more specific information provided by the manufacturer of the respirator that will be used. EOH can provide assistance as needed.

Inspection

An inspection must always be performed prior to each use of the respirator as follows:

- 1. The respirator is clean and proper cartridges are in place.
- 2. Examine the blower housing for cracks or warping.
- 3. Examine the battery for cracks and ensure it latches properly. Replace if damaged.
- 4. Inspect the breathing tube and replace if punctured, cracked or worn.
- 5. Bend the breathing tube to verify that it is flexible.
- 6. Ensure there are no punctures or tears in the hood or other equipment.
- 7. Ensure the lens is not damaged in a way that affects performance or visibility.
- 8. Successfully complete the manufacturer directed User Performance Check/Airflow Check to ensure sufficient airflow is achieved per manufacturer's recommendations.

Putting On (Donning)

- 1. Each time immediately prior to use, complete assembly, inspection and user airflow check of the PAPR assembly as provided by the manufacturer.
- 2. Complete assembly and fitting of the respirator headgear in accordance with the manufacturer instructions provided with the respirator headgear.
- 3. Place the belt with PAPR assembly around the waist and snap the buckle closed.
- 4. Adjust the belt as needed for a comfortable and secure fit.
- 5. Press the power switch to turn the system on and verify air is flowing to the headgear.
- 6. Don the respirator headgear, then enter the contaminated area.
- 7. **Note:** Most PAPR units and batteries are not waterproof. They should not be submersed or subjected to heavy spraying with water or other liquids. High concentrations of mist or sprays may temporarily clog filters and cause airflow to drop below safe levels.
- **8.** Do not remove the respirator or reach your hand into the headgear in areas where the air is contaminated.

Removing (Doffing) Respirator

Follow department specific exiting and decontamination procedures for turning off the blower motor and removing the respirator.

Cleaning and Sanitizing

Follow the manufacturer's cleaning and disinfection recommendations. Cleaning procedures generally involve:

- 1. **Motor blower unit:** Clean the outer surfaces of the PAPR Assembly with a soft cloth dampened in a solution of water and mild, pH neutral detergent. Do not immerse the motor blower or battery pack in water. Do not use solvents or abrasive cleaners.
- 2. **Breathing tube:** Clean the connection sites on the breathing tube with the water and detergent solution or dispose and replace.
- 3. **PAPR belt:** If fabric, it can be machine washed in cold water with a mild detergent. Air dry. If plastic, clean wipe with appropriate cleaner as instructed by manufacturer.

4. Filters: Do not attempt to clean the filters. Properly dispose of used filters. Dispose of the filter according to applicable regulations and department requirements.

Respirator Storage

Store your respirator as required by the department and at room temperature in a dry area that is protected from exposure to hazardous contaminants.

Appendix F: Voluntary Respirator Use

1.0 Scope and Purpose

Where respirator use is not required or recommended for protection of employee health, the work unit may choose to allow voluntary use of respirators for employees who wish to wear them for additional health protection. Where voluntary respirator use is allowed, the department must be certain that overexposure to air contaminants is not likely to occur under normal working conditions. Voluntary respirator use focuses on the ability to wear a respirator without aggravating a medical condition and keeping the respirator clean to prevent dermatitis and other skin hazards. Please note that to assure the safe use of respirators across campus, a respiratory protection hazard assessment (Appendix A) and Authorized user list (Appendix B) must be completed for all respirator users.

It is the University's position that if an individual is wearing a disposable N-95 respirator voluntarily, they should be medically cleared and fit tested annually. If an employee is wearing a reusable tight fitting rubber/silicone face piece respirator, they must be medically cleared and fit tested annually.

Periodic Evaluation

Department management must periodically evaluate performance of voluntary respirator use. OSHA does not have a specified annual review. Rather, through frequent observation, if exposure conditions change, additional work area respiratory hazard surveys will be done as needed or required.

Work units must provide to each voluntary user the mandatory awareness information in <u>Appendix D of the OSHA respirator standard</u>, as included below.

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 shall 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.

The Environmental and Occupational Health Unit should be contacted prior to the use of a respirator. By signing this form you are acknowledging that you have read and understand all of its content.

Printed Name	Signature	Date