

Dutchess Community College

Respiratory Protection Program

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Purpose:

The Dutchess Community College Respiratory Protection Program is designed to protect employees by establishing accepted practices for respirator use, providing guidelines for training and respirator selection, and explaining proper storage, use and care of respirators.

Introduction:

This Respiratory Protection Program is a written document that provides a guideline to ensure compliance with the Occupational Safety and Health Administration (OSHA) Standard 29CFR 1910.134 Respiratory Protection. The document shall be used to protect employees on all Dutchess Community College owned or leased facilities where exposure to airborne contaminants cannot be eliminated or reduced to safe levels, or as an added measure of protection in certain situation. This goal will be accomplished through effective education, engineering and administrative controls, use of respirators, and enforcement of the program.

Definitions:

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

Assigned protection factor (APF) means the workplace level of respiratory protection that a respirator or class of respirators is expected to provide to employees when the employer implements a continuing, effective respiratory protection program as specified by this section.

Atmosphere-supplying respirator means a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.

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

Demand respirator means an atmosphere-supplying respirator that admits breathing air to the facepiece only when a negative pressure is created inside the facepiece by inhalation.

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

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

End-of-service-life indicator (ESLI) means a system that warns the respirator user of the approach of the end of adequate respiratory protection, for example, that the sorbent is approaching saturation or is no longer effective.

Escape-only respirator means a respirator intended to be used only for emergency exit.

Filter or air purifying element means a component used in respirators to remove solid or liquid aerosols from the inspired air.

Filtering facepiece (dust mask) means 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.

Fit factor means a quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

Fit test means the use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual. (See also Qualitative fit test QLFT and Quantitative fit test QNFT.)

Helmet means a rigid respiratory inlet covering that also provides head protection against impact and penetration.

High efficiency particulate air (HEPA) filter means a filter that is at least 99.97% efficient in removing monodisperse particles of 0.3 micrometers in diameter. The equivalent NIOSH 42 CFR 84 particulate filters are the N100, R100, and P100 filters.

Hood means a respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.

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

Interior structural firefighting means the physical activity of fire suppression, rescue or both, inside of buildings or enclosed structures which are involved in a fire situation beyond the incipient stage. (See 29 CFR 1910.155)

Loose-fitting facepiece means a respiratory inlet covering that is designed to form a partial seal with the face.

Maximum use concentration (MUC) means the maximum atmospheric concentration of a hazardous substance from which an employee can be expected to be protected when wearing a respirator, and is determined by the assigned protection factor of the respirator or class of respirators and the exposure limit of the hazardous substance. The MUC can be determined mathematically by multiplying the assigned protection factor specified for a respirator by the required OSHA permissible exposure limit, short-term exposure limit, or ceiling limit. When no OSHA exposure limit is available for a hazardous substance, an employer must determine an MUC on the basis of relevant available information and informed professional judgment.

Negative pressure respirator (tight fitting) means a respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.

Oxygen deficient atmosphere means an atmosphere with an oxygen content below 19.5% by volume.

Physician or other licensed health care professional (PLHCP) means an individual whose legally permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the health care services required by paragraph (e) of this section.

Positive pressure respirator means a respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

Powered air-purifying respirator (PAPR) means an air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

Pressure demand respirator means a positive pressure atmosphere-supplying respirator that admits breathing air to the

facepiece when the positive pressure is reduced inside the facepiece by inhalation.

Qualitative fit test (QLFT) means a pass/fail fit test to assess the adequacy of respirator fit that relies on the individual's response to the test agent.

Quantitative fit test (QNFT) means an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

Respiratory inlet covering means that portion of a respirator that forms the protective barrier between the user's respiratory tract and an air-purifying device or breathing air source, or both. It may be a facepiece, helmet, hood, suit, or a mouthpiece respirator with nose clamp.

Self-contained breathing apparatus (SCBA) means an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

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

Supplied-air respirator (SAR) or airline respirator means an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

This section means this respiratory protection standard.

Tight-fitting facepiece means a respiratory inlet covering that forms a complete seal with the face.

User seal check means an action conducted by the respirator user to determine if the respirator is properly seated to the face.

Permissible Practice:

In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to this program.

Assignment of Responsibility:

A. Employer:

Dutchess Community College is responsible for providing respirators to employees when they are necessary for health protection. Dutchess Community College will provide respirators that are applicable and suitable for the intended purpose at no charge to affected employees. Any expense associated with training, medical evaluations and respiratory protection equipment will be borne by Dutchess Community College.

B. Program Administrator:

The Program Administrator for Dutchess Community College is the Safety Coordinator. The Program Administrator is responsible for administering the respiratory protection program. Duties of the Program Administrator include:

1. Identifying work areas, process or tasks that require workers to wear respirators.
2. Evaluating hazards.
3. Selecting respiratory protection options.
4. Monitoring respirator use to ensure that respirators are used in accordance with their specifications.

5. Arranging for and/or conducting training.
6. Ensuring proper storage and maintenance of respiratory protection equipment.
7. Coordinating the medical surveillance program.
8. Maintaining records required by the program.
9. Evaluating the program.
10. Updating written program, as needed.

C. Supervisors/Department Heads:

Supervisors and/or Department Heads or their designee 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 and/or Department Heads must also ensure that the program is understood and followed by the employees under their charge. Duties include:

1. Notifying the Program Administrator when new employees are to perform work task in which the use of respirators are required or the volunteer use of respirators has been requested.
2. Ensuring that employees under their supervision (including new hires) receive appropriate training, fit testing, and annual medical evaluation.
3. Ensuring the availability of appropriate respirators and accessories.
4. Ensuring that employees are wearing the appropriate respirator during work tasks requiring the use of respirators.
5. Being aware of tasks requiring the use of respiratory protection.
6. Enforcing the proper use of respiratory protection when necessary.
7. Ensuring that respirators are properly cleaned, maintained, and stored according to this program.
8. Ensuring that respirators fit well and do not cause discomfort.
9. Continually monitoring work areas and operations to identify respiratory hazards.

10. Coordinating with the Program Administrator on how to address respiratory hazards or other concerns regarding this program.

D. Employees:

Each employee is responsible for wearing his or her respirator when and where required and in the manner in which they are trained. Employees must also:

1. Care for and maintain their respirators as instructed, guard them against damage, and store them in a clean, sanitary location.
2. Inform their Supervisor/Department Head if their respirator no longer fits well, and request a new one that fits properly.
3. Inform their Supervisor/Department Head or the 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 this program.
4. Use the respiratory protection in accordance with the manufacturer's instructions and the training received.

Applicability:

This program applies to all employees who are required to wear respirators during normal work operations.

In addition, any employee who voluntarily wears a respirator when one is not required (i.e., in certain maintenance operations) is subject to the medical evaluation, cleaning, maintenance, and storage elements of this program, and will be provided with necessary training. Employees who voluntarily wear filtering face pieces (dust masks) are not subject to the medical evaluation, cleaning, storage, and maintenance provisions of this program.

Note: Voluntary use of respirators must be approved by the Program Administrator prior to use.

Program:

A. Hazard Assessment and Respirator Selection:

The Program Administrator will work with Departments in selecting respirators to be used on site, based on the hazards to which workers are exposed and in accordance with the OSHA Respiratory Protection Standard. The 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. A log of identified hazards will be maintained by the Safety Coordinator. The hazard evaluations shall include:

- i. Identification and development of a list of hazardous substances used in the workplace by department or work process.
- ii. Review of work processes to determine where potential exposures to hazardous substances may occur. This review shall be conducted by surveying the workplace and talking with employees and supervisors.
- iii. Exposure monitoring to quantify potential hazardous exposures when necessary.

The proper type of respirator for the specific hazard involved will be selected in accordance with the manufacturer's instructions. A list of employees and appropriate respiratory protection will be maintained by the Program Administrator (see Attachment C).

B. Updating the Hazard Assessment:

The Program Administrator must revise and update the hazard assessment 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, they are to contact their Supervisor/Department Head or the Program Administrator. The Program Administrator will

evaluate the potential hazard, and arrange for outside assistance as necessary. They will then communicate the results of that assessment to the employees. If it is determined that respiratory protection is necessary, all other elements of the respiratory protection program will be in effect for those tasks.

C. Training:

The Program Administrator will provide training to respirator users and their Supervisors/Department Head on the contents of the Dutchess Community College Respiratory Protection Program and their responsibilities under it, and on the OSHA Respiratory Protection Standard. All affected employees and their Supervisors/Department Heads or designees will be trained prior to using a respirator in the workplace. Supervisors will also be trained prior to supervising employees that must wear respirators.

The training course will cover the following topics:

- i. the Dutchess Community College Respiratory Protection Program;
- ii. the OSHA Respiratory Protection Standard (29 CFR 1910.134);
- iii. respiratory hazards encountered at Dutchess Community College and their health affects;
- iv. proper selection and use of respirators;
- v. limitations of respirators;
- vi. respirator donning and user seal (fit) checks;
- vii. fit testing;
- viii. maintenance and storage; and
- ix. medical signs and symptoms limiting the effective use of respirators.

Employees will be retrained annually or as needed (e.g., if they change departments or work processes and need to use a different respirator). Employees must demonstrate their understanding of the topics covered in the training through hands-on exercises and/or a written test. 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.

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

E. Voluntary Respirator Use:

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

The Program Administrator will provide all employees who voluntarily choose to wear the above respirators with a copy of Appendix D of the OSHA Respiratory Protection Standard. (Appendix D details the requirements for voluntary use of respirators by employees.) Employees who choose to wear a half face piece APR must comply with the procedures for Medical Evaluation, Respirator Use, Cleaning, Maintenance and Storage portions of this program.

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

F. Medical Evaluation:

Employees who are either required to wear respirators, or who choose to wear a half face piece APR voluntarily, must pass a medical exam provided by **Emergency One** 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 at **Emergency One, Hyde Park, NY**, where company medical services are provided, will provide the medical evaluations. Medical evaluation procedures are as follows:

- i. The medical evaluation will be conducted using the OSHA Respirator Medical Evaluation Questionnaire provided in the OSHA Respiratory Protection Standard 29CFR 1910.134 App C or an equivalent supplied by our medical provider. The Program Administrator will provide a copy of this questionnaire to all employees requiring medical evaluations.
- ii. To the extent feasible, the company will provide assistance to employees who are unable to read the questionnaire. When this is not possible, the employee will be sent directly to the physician for medical evaluation.
- iii. All affected employees will be given a copy of the medical questionnaire to complete. Employees will be permitted to complete the questionnaire on company time.
- iv. Follow-up medical exams will be granted to employees as required by the Standard, and/or as deemed necessary by the evaluating physician.
- v. All employees will be granted the opportunity to speak with the physician about their medical evaluation, if they so request.
- vi. The Program Administrator shall provide the evaluating physician with a copy of this Program, a copy of the OSHA Respiratory Protection Standard, the list of hazardous substances by work area, and the following information about each employee requiring evaluation:

1. his or her work area or job title;
 2. proposed respirator type and weight;
 3. length of time required to wear respirator;
 4. expected physical work load (light, moderate or heavy);
 5. potential temperature and humidity extremes; and
 6. any additional protective clothing required.
- vii. Positive pressure air purifying respirators will be provided to employees as required by medical necessity.
- viii. After an employee has received clearance to wear his or her respirator, additional medical evaluations will be provided under the following circumstances:
1. The employee reports signs and/or symptoms related to their ability to use the respirator, such as shortness of breath, dizziness, chest pains or wheezing.
 2. The evaluating physician or supervisor informs the Program Administrator that the employee needs to be reevaluated.
 3. Information found during the implementation of this program, including observations made during the fit testing and program evaluation, indicates a need for reevaluation.
 4. A change occurs in workplace conditions that may result in an increased physiological burden on the employee.

A list of Dutchess Community College employees currently included in medical surveillance will be maintained by the Program Administrator.

All examinations and questionnaires are to remain confidential between the employee and the physician. The Program Administrator will only retain the physicians written

recommendations regarding each employee's ability to wear a respirator.

G. Fit Testing:

Employees who are required to or who voluntarily wear half-face piece APRs will be fit tested:

- i. prior to being allowed to wear any respirator with a tight-fitting face piece;
- ii. annually; or
- iii. when there are changes in the employee's physical condition that could affect respiratory fit (e.g., obvious change in body weight, facial scarring, 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 powered air purifying respirators will be conducted in the negative pressure mode.

The Program Administrator will arrange to have fit tests in accordance with the OSHA Respiratory Protection Standard.

H. General Respirator Use Procedures:

- i. Employees will use their respirators under conditions specified in 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.
- ii. All employees shall conduct user seal checks each time they wear their respirators. Employees shall use either the positive or negative pressure check (depending on which

test works best for them) as specified in the OSHA Respiratory Protection Standard.

1. Positive Pressure Test: This test is performed by closing off the exhalation valve with your hand. Breathe air into the mask. The face fit is satisfactory if some pressure can be built up inside the mask without any air leaking out between the mask and the face of the wearer.
 2. Negative Pressure Test: This test is performed by closing of the inlet openings of the cartridge with the palm of you hand. Some masks may require that the filter holder be removed to seal off the intake valve. Inhale gently so that a vacuum occurs within the face piece. Hold your breath for ten (10) seconds. If the vacuum remains, and no inward leakage is detected, the respirator is fit properly.
- iii. All employees shall be permitted to leave the work area to maintain their respirator for the following reasons:
1. to clean their respirator if it is impeding their ability to work;
 2. to change filters or cartridges;
 3. to replace parts; or
 4. to inspect respirator if it stops functioning as intended.
- iv. Employees are not permitted to wear tight-fitting respirators if they have any condition, such as facial scars, facial hair, or missing dentures that would prevent a proper seal. Employees are not permitted to wear headphones, jewelry, or other items that may interfere with the seal between the face and the face piece.

- v. Before and after each use of a respirator, an employee or immediate supervisor must make an inspection of tightness or connections and the condition of the face piece, headbands, valves, filter holders and filters. Questionable items must be addressed immediately by the Supervisor/Department Head.

I. Air Quality:

Supplied-air respirators are not currently used at Dutchess Community College. If at any time a need arises that would require supplied-air respirators then this program will be modified to include the requirements as outlined in the OSHA Standard for Respiratory Protection by the Program Administrator.

J. Change Schedules:

Respirator cartridges shall be replaced as determined by the Program Administrator, Supervisor(s), and manufacturer's recommendations.

K. Cleaning:

Respirators are to be regularly cleaned and disinfected. Respirators issued for the exclusive use of an employee shall be cleaned as often as necessary.

The following procedure is to be used when cleaning and disinfecting reusable respirators:

- i. Disassemble respirator, removing any filters, canisters, or cartridges.
- ii. Wash the face piece and all associated parts (except cartridges and elastic headbands) in an approved cleaner-disinfectant solution in warm water (about 120 degrees Fahrenheit). Do not

- use organic solvents. Use a hand brush to remove dirt.
- iii. Rinse completely in clean, warm water.
- iv. Disinfect all facial contact areas by spraying the respirator with an approved disinfectant.
- v. Air dry in a clean area.
- vi. Reassemble the respirator and replace any defective parts. Insert new filters or cartridges and make sure the seal is tight.
- vii. Place respirator in a clean, dry plastic bag or other airtight container.

The Supervisor and/or Department Head will ensure an adequate supply of appropriate cleaning and disinfection materials. Is kept on hand. If supplies are low, employees should notify their Supervisor/Department Head, who will reorder products as needed.

L. Maintenance:

Respirators are to be properly maintained at all times in order to ensure that they function properly and protect employees adequately. 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.

- i. All respirators shall be inspected routinely before and after each use.
- ii. The Respirator Inspection Checklist (Attachment E) will be used when inspecting respirators.
- iii. 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:

1. washing face and respirator face piece to prevent any eye or skin irritation;
2. replacing the filter, cartridge or canister;
3. detection of vapor or gas breakthrough or leakage in the face piece; or
4. detection of any other damage to the respirator or its components.

M. Storage:

After inspection, cleaning, and necessary repairs, respirators shall be stored appropriately to protect against dust, sunlight, heat, extreme cold, excessive moisture, or damaging chemicals.

- i. 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 the designated area. Each employee will have his/her name on the bag and that bag will only be used to store that employee's respirator.
- ii. Respirators shall be packed or stored so that the face piece and exhalation valve will rest in a near normal position.
- iii. Respirators shall not be placed in places such as lockers or toolboxes unless they are in carrying cartons.
- iv. The Program Administrator or their designee will store a supply of respirators and respirator components in their original manufacturer's

packaging in a **Designated Area** in the appropriate department.

N. Respirator Malfunctions and Defects:

- i. 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/her supervisor. Supervisors will give all defective respirators to the Program Administrator. The Program Administrator will decide whether to:
 1. temporarily take the respirator out of service until it can be repaired;
 2. perform a simple fix on the spot, such as replacing a head strap; or
 3. 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 a similar make, model, and size. All tagged out respirators will be kept in the **Designated Area**.

O. 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. Items to be considered will include:

- i. comfort;
- ii. ability to breathe without objectionable effort;
- iii. adequate visibility under all conditions

- iv. provisions for wearing prescription glasses;
- v. ability to perform all tasks without undue interference; and
- vi. confidence in the face piece fit.

Identified problems will be noted and addressed by the Program Administrator. These findings will be reported to Dutchess Community College Administration, and the report will list plans to correct deficiencies in the respirator program and target dates for the implementation of those corrections.

P. Documentation and Recordkeeping:

- i. A written copy of this program and the OSHA Respiratory Protection Standard shall be kept in the Program Administrator office and made available to all employees who wish to review it. In addition the written program is available for all employees on the Dutchess Community College website. It can be found at MyDCC under the Working at DCC tab follow the link that is listed under Campus Safety.
- ii. Copies of training and fit test records shall be maintained by the Program Administrator. These records will be updated as new employees are trained, as existing employees receive refresher training, and as new fit tests are conducted.
- iii. For employees covered under the Respiratory Protection Program, the Program Administrator shall maintain copies of the physician's written recommendation regarding each employee's ability to wear a respirator. The completed medical questionnaires and evaluating physician's documented findings will remain confidential in the employee's medical records at the location of the evaluating physician's practice.

Appendix A

Steps in Obtaining a Respirator

1. If you or your supervisor think a respirator (including a disposable N95 respirator or dust mask) is needed, contact the Department for Risk Management; Safety Coordinator at 845-431-8650 to schedule a workplace evaluation.
2. If a respirator is warranted the Safety Coordinator will make arrangements for the employee to receive a physical exam and fit test with Emergency One at the Hyde Park Office. If a certain type respirator is needed, it will be purchased by the department prior to the appointment. The respirators must accompany the employee to the appointment for fit testing.
3. If voluntary use of a disposable respirator is all that is needed, no medical evaluation is needed. For voluntary use of disposable respirators the Safety Coordinator will provide training and written instructions on the use and care of these respirators at the time of the workplace evaluation. No further action is necessary.
4. The physician's recommendation on whether the individual can use a respirator will be forwarded to Department for Risk Management. The respirator will then be permanently assigned to that employee for use.
5. The respirator user and supervisor will be notified of the need for annual fit testing and training (and medical evaluation if applicable).

Appendix B

Record of Respirator Use

Required and Voluntary Respirator Use at Dutchess Community College	
Type of Respirator	Department/Process

Appendix C

Record of Respirator Issuance

<i>Dutchess Community College</i> Personnel in Respiratory Protection Program				
Respiratory protection is required for and has been issued to the following personnel:				
Name	Department	Job Description/ Work Procedure	Type of Respirator	Date Issued

Appendix D

Respirator Inspection Checklist

Type of Respirator:	Location:
Respirator Issued to:	Type of Hazard:
Face piece	<input type="checkbox"/> Cracks, tears, or holes <input type="checkbox"/> Face mask distortion <input type="checkbox"/> Cracked or loose lenses/face shield
Head straps	<input type="checkbox"/> Breaks or tears <input type="checkbox"/> Broken buckles
Valves:	<input type="checkbox"/> Residue or dirt <input type="checkbox"/> Cracks or tears in valve material
Filters/Cartridges:	<input type="checkbox"/> Approval designation <input type="checkbox"/> Gaskets <input type="checkbox"/> Cracks or dents in housing <input type="checkbox"/> Proper cartridge for hazard
Air Supply Systems	<input type="checkbox"/> Breathing air quality/grade <input type="checkbox"/> Condition of supply hoses <input type="checkbox"/> Hose connections <input type="checkbox"/> Settings on regulators and valves
Rubber/Elastomer Parts	<input type="checkbox"/> Pliability <input type="checkbox"/> Deterioration

Inspected by:	Date:
Action Taken:	

Appendix E

Respirator Training Information Use, Care and Maintenance of Respirators

Section 1 – Disposable Respirators (N95, P95, N99, N100, P100)

Use of disposable respirators

Only use this respirator for the work task evaluated by Department for Risk Management and your supervisor. This respirator is not intended for use in the following situations:

- Oxygen deficiency
- Where concentrations of contaminants are immediately dangerous to life and health
- For protection against asbestos, gases, vapors or spray painting

Since it is important to obtain an effective seal against the face, the respirator user must be clean shaven in the area where the respirator contacts the face. If the respirator has a valve, facial hair must not come in contact with the valve.

If wearing glasses or goggles or other personal protective equipment, ensure that the straps of the respirator are UNDER these items. The straps must lay flat on the head to maintain a good fit.

If breathing becomes difficult or you feel dizzy or nauseous or have other symptoms, leave the work area immediately and take off your respirator. Report this to your supervisor and seek medical attention if necessary.

Never alter the respirator in any way. Do not allow others to wear your respirator.

Fitting instructions

1. Hold the respirator in hand with the nosepiece at your fingertips, allowing the headbands to hang freely below your hand.
2. Press the respirator firmly against your face with the nosepiece on the bridge of your nose.
3. Stretch and position the top headband high on the back of your head, above the ears. Stretch the bottom band over the head and position below your ears.

4. Adjust the respirator for comfortable fit. Using both hands, mold the metal nose piece to the shape of your nose.
5. To test fit, cup both hands over the respirator. If the respirator does not contain an exhalation valve, exhale vigorously. If the respirator contains an exhalation valve, inhale vigorously. If air flows around your nose, tighten the nosepiece; if air leaks around the edges, reposition the straps to fit better.
6. Change respirator immediately if breathing becomes difficult or respirator becomes damaged or distorted, or a proper face fit cannot be maintained.
7. If one of the straps breaks, immediately leave the work area and obtain a new respirator. Do not attempt to repair the respirator yourself.

Taking Off the respirator:

1. Remove the respirator and discard in the appropriate covered container
2. Always wash your hands (and face if necessary) after use.

Maintenance & Care

These are disposable respirators intended for one time use only. The same respirator may be re-used during the same work shift if it has not become contaminated or damaged in any way. Perform a new fit check according to the above procedures if re-fitting the same respirator in the same work shift.

Unused respirators should remain in the box they came in or in a plastic bag at your work area where it will not be damaged or crushed.

These respirators should not be cleaned for re-use. Dispose in covered waste container or along with other contaminated protective equipment as appropriate to your department's procedures.

Fitting a potentially infectious patient with a respirator

Follow the fitting instructions above, ensuring that both straps are in place on the patient's head. Check that the respirator is in contact with the face in all areas to obtain the best seal. Mold the nose piece to the shape of the patient's nose.

Section 2 – Air Purifying Respirators (training conducted by Department for Risk Management)

Hazard Communication

Discuss with employee the general health hazards associated with the contaminants for which they are requesting respiratory protection. Discuss items such as potential for skin absorption, and other items related to safety and health.

Proper Respirators for Specific Tasks

Discuss with employee the specific use of respirator and cartridges for the work to be performed. Chemical cartridges and filters do not have the same capabilities. For example, gas and vapor air purifying respirators provide no protection against particulate contaminants unless specified on the canister or chemical cartridge label. Different chemical contaminants may need different cartridges to remove the contaminant. Selection of cartridges should be done in consultant with the Safety Coordinator. Likewise, particulate removing respirators protect against non-volatile particles and do not provide protection against gases and vapors. Neither of these types which are classified as air purifying respirators will provide protection where there is insufficient oxygen levels. A self-contained breathing apparatus (SCBA) is the appropriate respirator for emergencies in atmosphere containing less than 19.5% oxygen.

Assignment

Each respirator shall be permanently assigned to an individual. A respirator assigned to one employee shall not be used by other employees. Other employees wishing to use respiratory protection must obtain their own respirator. Respiratory equipment shared by employees shall be properly cleaned after each use. Employees with facial hair that comes between the sealing surface of the facepiece and the face, or that interferes with the valve function are not permitted to wear tight-fitting respirators.

Respirator Inspection

Prior to each usage, the employee should inspect the following:

1. Tightness of connections.
2. Condition of facepiece, straps, cartridges and/or filters.
3. Condition of exhalation and inhalation valves. If the sides of the exhalation valve gap even slightly, a new valve shall be installed.
4. Pliability and flexibility of rubber parts. Deteriorated respirators shall be replaced.
5. Condition of lenses of full face respirators. Damaged lenses shall be replaced or the respirator shall be returned to the manufacturer for repair, where applicable.

The Safety Coordinator shall be the contact point for issue, repair, and return of all respirators.

Donning the Respirator and Checking its Fit and Operation

Instruct employees how to properly don and doff the respirator. This includes facepiece-to-face seal using the negative and positive pressure tests (See fit testing, paragraph H of Procedures Section). Conditions which may possibly prevent a satisfactory seal include long sideburns, a beard and/or mustache, temples on eyeglasses, absence of dentures, heavy make-up or an unusual face structure. If the conditions cannot be corrected or eliminated, the worker shall not be assigned to any area requiring routine or emergency use of respiratory protection.

Cleaning the Respirator

Respirators shall be regularly cleaned and disinfected. Those issued for the exclusive use of one worker shall be cleaned as often as necessary. Those used by more than one worker (such as emergency respirators, SCBA, etc.) shall be thoroughly cleaned and disinfected after each use. OSEH recommends the use of respirator refresher wipe pads to disinfect the respirator. The following procedures shall be utilized for the cleaning of respirators.

1. Remove any filters or cartridges. Discard any filters which are clogged or cartridges which are spent.
1. Wash facepiece and breathing tube (if applicable) with a mild detergent and warm water
2. using a soft brush to facilitate removal of dirt.
3. Rinse completely in clean warm water.
4. Air dry in a clean area.
5. Inspect valves, headstraps, and other parts. If defects are found, contact OSEH before
6. using the respirator.
6. After drying, place facepiece in a plastic bag or container for storage.
7. Insert new filters or cartridges prior to use (making certain the seal is tight).

Storage of Respirators

When not in use, the respirator and cartridges should be kept in a sealed plastic bag and stored in a clean, dry, moderate temperature, non-contaminated environment. It is especially important to keep gas and vapor cartridges in a sealed container, so they do not absorb gases and vapors from the storage environment. Particulate filters should also be protected from dust and dirt to enhance their service life. Care should be taken to prevent deformation of respirator during storage. Respirators placed at work stations and work areas for emergency use shall be stored in compartments built for this purpose and must be quickly accessible at all times and clearly marked. Manufacturer's instructions shall be closely followed for proper storage of masks.

Respirator Limitations and Change-out Schedules

A respirator and cartridges are selected for specific contaminants based on the tasks performed by the employee. A cartridge that filters one substance may not necessarily be used for another. Any new exposures need to be re-evaluated to ensure that the proper respiratory protection is provided.

The service time of any cartridge or filter will depend on how often the respirator is worn and the levels of contamination in which it is used. Gas and vapor cartridges need to be changed at a minimum of every 6 months or for contaminants with good warning properties, as soon as the wearer detects any odor, taste, or irritation. Particulate filters may also be changed out every six months or used until breathing resistance increases to an "uncomfortable" level.

General Limitations

As stated in the section on donning the respirator, beards, facial hair, mustaches, heavy make-up dentures, and glasses can interfere with a face seal. Tight fitting respirators will not be issued to employees with facial hair that interferes with the seal. These employees shall not be assigned to any area requiring routine or emergency use of tight fitting respirators. If the wearer of a respirator has a significant weight change (10 lbs. or more), the employee shall be fit tested again. Contact lenses may be worn with full facepiece respirators if they are rigid gas permeable or soft (hydrophilic) lenses. Hard, nonpermeable lenses shall not be worn with full facepiece respirators.

The Department for Risk Management recommends frequent breaks if a respirator is to be worn for any length of time.

TABLE I: HAZARD COMMUNICATION INFORMATION RESPIRATORY HAZARD EXAMPLES HEALTH EFFECTS

Oxygen Deficiency (less than 19.5% oxygen by volume in respirable air) May exist in confined spaces such as tanks, wells, pits. Effects range from slightly impaired coordination and breathing effects to nausea, vomiting, and unconsciousness, to death within minutes depending on percentage of O₂ in the air.

Asphyxiants

(Simple - materials which displace oxygen in air to create an O₂ deficiency.
Chemical - materials which act to render the body unable to utilize oxygen.)

Simple - nitrogen, hydrogen, methane, helium, neon, argon

Chemical - carbon monoxide, hydrogen, hydrogen sulfide, nitriles

Carcinogens

Gas/Vapor- benzene, carbon tetrachloride, vinyl chloride

Particulate- radioactive particulate, asbestos, chromates

Development of cancer after a period of time.

Irritants Gas/Vapor- ammonia, hydrogen chloride, sulfur dioxide, hydrogen sulfide, chlorine, ozone

Particulate- fiberglass, acidic mists, alkali mists May cause irritation and inflammation to various parts of the respiratory system. Pulmonary edema may also result. Chronic bronchitis may be seen with long-term exposure.

Eye and Skin irritation may also be a concern.

Systemic Poisons

Gas/Vapor- mercury, lead, hydrogen sulfide, organic solvents, pesticides, ethylene oxide, ether, carbon tetrachloride, chloroform, benzene, carbon disulfide

Particulate- lead, cadmium, pesticides

Acute effects may include irritation to eyes, nose, and throat, headache, nausea, vomiting, dizziness, drowsiness, incoordination, and unconsciousness. Long term exposure may involve damage to organs and systems such as nervous system, kidneys, liver, blood, bone or respiratory system. May also have reproductive effects.

Appendix F

Dutchess Community College

Voluntary use of respiratory protection - General-Industry Requirements

Voluntary use of respiratory protection means that an employee chooses to wear a respirator, even though a respirator is not required by the employer or by any OSHA standard.

In accordance with 29CFR 1910.134(c)(2) :

Where respirator use is not required:

An employer may provide respirators at the request of employees or permit employees to use their own respirators, if the employer determines that such respirator use will not in itself create a hazard. If the employer determines that any voluntary respirator use is permissible, employers must provide a copy of Appendix D of 29 CFR 1910.134, Respiratory Protection ("Information for Employees Using Respirators When Not Required under the Standard"), to employees who voluntarily use a filtering face piece "dust mask".

NOTE: For all other types of respirators, additional requirements include a written respiratory protection program that covers medical fitness and proper maintenance procedures even if the employee uses his own respirator.

By signing below I acknowledge that I have received; read and I understand Appendix D and the information provided. If further information is required please contact the Department of Human Resources Office of Risk Management.

Employee Print

Name _____ Date _____

A copy must be returned to Safety Coordinator.

Please note that it is up to supervisory personnel to ensure that employees are not using N95's in place of other equipment in situations where respirators are required.

- Part Number: 1910
- Part Title: Occupational Safety and Health Standards
- Subpart: I
- Subpart Title: Personal Protective Equipment
- Standard Number: 1910.134 App D
- Title: (Mandatory) Information for Employees Using Respirators When not Required Under Standard.

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

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

You should do the following:

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

[63 FR 1152, Jan. 8, 1998; 63 FR 20098, April 23, 1998]