Respiratory Protection Policy

University of Illinois at Urbana-Champaign
Division of Safety and Compliance

Respiratory Protection Policy
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CONTENTS
Purpose..................................................................................................................3
Policy.....................................................................................................................3
Scope.....................................................................................................................3
References.............................................................................................................3
Responsibilities...................................................................................................3
Definitions...........................................................................................................5
General Requirements........................................................................................8
  Use of a Respirator...............................................................................................9
  Physician’s Written Opinion...............................................................................9
  Voluntary Use.....................................................................................................10
  Selection..............................................................................................................10
  Training..............................................................................................................11
  Fit Testing...........................................................................................................12
  Use of Respirators in Immediate Dangerous to Life and Health Atmospheres....14
  Inspections.........................................................................................................14
  Cleaning and Disinfecting.................................................................................15
  Repairs and Replacement Parts.........................................................................16
  Storage...............................................................................................................16
  Breathing Air Quality & Use..............................................................................16
  Recordkeeping...................................................................................................17
  Program Evaluation.........................................................................................18
Appendix 1 – Student Respiratory Questionnaire.................................................19
Appendix 2 – McKinley Medical Record Release..................................................23
Appendix 3 – Employee, Faculty, and Staff Respiratory Questionnaire.................24
Appendix 4 – Employee, Faculty, and Staff Medical Clearance Procedure..........30
Appendix 5 – Respiratory Protection Program Standard Operating Procedure....31
Appendix 6 – Training Record.............................................................................33
Appendix 7 – Fit Test Record...............................................................................34
Appendix 8 – Voluntary Respirator Use Responsibilities.....................................35
I. PURPOSE

The University of Illinois at Urbana-Champaign (UIUC), through the Division of Safety and Compliance (S&C), has established this Respiratory Protection Policy to protect the health of university employees and to assure compliance with State and Federal occupational safety and health standards.

This Policy provides the minimum requirements for unit specific respiratory protection programs. It is expected that campus units utilizing this Respiratory Protection Policy will develop unit-specific programs and site-specific written standard operating procedures (SOP) to complement and meet the requirements in this general policy.

II. POLICY

It is the policy of the UIUC to provide its employees a safe and healthy work environment.

III. SCOPE

The provisions of the Respiratory Protection Policy shall apply to all students, employees, faculty, and staff (hereafter called “respiratory users”) that meet the following criteria:

A. Where respirators are necessary to protect the health of an individual.
B. Wherever the University requires respirators to be worn.
C. Where respirators are voluntarily worn for comfort, personal reasons, and/or emergencies.

IV. REFERENCES


V. RESPONSIBILITIES

The Division of Safety and Compliance shall:

A. Develop and implement a written respiratory protection program and provide an annual review of the program.
B. Conduct hazard evaluations and/or air monitoring upon request. Material and analytical costs for air monitoring, if any, will be paid by the requesting department.
C. Assist business units in the selection of appropriate respiratory protection.
D. Provide OSHA required training on respiratory protection for business units and respirator users.
E. Conduct or arrange for fit testing for business units and respirator users.
F. Maintain copies or logs of medical clearance, training, and fit-testing records.
G. Assist business units in developing unit-specific written programs for respirators.

Deans, Department Heads, and Directors of academic/administrative units shall:
A. Ensure that their unit-specific Respiratory Protection Program meets the requirements of this Respiratory Protection Policy.
B. Provide fiscal and administrative resources for the implementation of their unit-specific Respiratory Protection Program.
C. Ensure that all personnel within their unit affected by this policy receive proper training and fit testing.
D. Designate a competent person that will be responsible for implementing the unit-specific Respiratory Protection Program.

Supervisors of respiratory users who require respiratory protection shall:
A. Establish and maintain budget support for this program.
B. Provide respirators (including cartridges and replacement parts), training, and medical evaluations at no cost to the respiratory users.
C. Allow time during working hours to complete the necessary training, medical questionnaire, fit testing, and medical evaluations.
D. Allow time during working hours to discuss the questionnaire and examination results with the Physician or Licensed Health Care Professional (PLHCP).
E. Survey the work area conditions and contact S&C when conditions exist that may require a respirator be worn when performing a task.
F. Contact S&C to determine voluntary use of respirators.
G. Attend training on proper selection, storage, use, and maintenance of respiratory protective equipment when individuals they supervise are required to use such equipment.
H. Assure that the requirements of this program are observed.
J. Conduct annual inspection and evaluation to determine the continued effectiveness of the program.

Respiratory Protection Competent Person shall:
A. Understand the requirements of this Respiratory Protection Policy and applicable OSHA regulations.
B. Have the knowledge and/or experience to create, maintain, revise, implement, and enforce the unit-specific Respiratory Protection Program.
C. Attend respiratory protection training.
D. Identify personnel who require respiratory protection training.
E. Train or arrange training for all affected personnel on the requirements of the unit-specific Respiratory Protection Program.
F. Ensure that the requirements of the unit-specific Respiratory Protection Program are followed.
G. Maintain a training record for all employees that have been trained in the components of the unit-specific Respiratory Protection Program.
The respirator users shall:
A. Report to the supervisor any operation or job suspected of requiring the use of respiratory protective equipment.
B. Attend training and fit testing on respiratory protection as required by this program.
C. Use respirators in accordance with instruction and training received.
D. Remain clean-shaven where facial hair may prevent a good face seal when required to use tight-fitting respirators.
E. Refrain from using respirators that fail inspection and immediately report to a supervisor problems associated with the unit.
F. Notify supervisor of a change in health status (especially circulatory or respiratory health), weight gain or loss of 20 pounds or more, a change in dental situation (teeth or dentures), or substantial scarring in the facial area. (These factors may affect the individual’s ability to maintain a proper fit for using a respirator.)

Physician or other licensed health care professional shall:
A. Determines an individual’s ability to wear a respirator.
B. Establish medical and physical criteria for users of respirators.
C. Provide S&C with written results of the medical evaluation as it applies to the employee’s ability to wear a respirator.

VI. DEFINITIONS

Acid Gas (AG) means an acidic substance in a volatile state.

Air Purifying Respirator (APR) means a respirators with a purifying or cleansing filter, cartridge or canister that removes specific air contaminants through negative pressure.

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, 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
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: A quantitative estimate of the fit of a particular respirator to a specific individual. Typically estimates of 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.)

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

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

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.

**NIOSH**: The National Institute for Occupational Safety and Health. A Department of Health and Human Services organization that conducts research on occupational safety and health issues.

**Organic Vapor (OV)**: Synthetic or naturally occurring carbon-containing compound in the vapor state, which can be inhaled and cause undue respiratory harm.

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

**Permissible Exposure Limit (PEL)**: An exposure limit published and enforced by OSHA as a legal standard.

**Physician or other Licensed Health Care Professional (PLHCP)**: An individual whose legally permitted scope of practice (license, registration or certification) allows him or her to independently provide, or be delegated the responsibility to provide medical evaluations and consultation.

**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.

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

**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)**: 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)**: An assessment of the adequacy of the respirator fit by numerically measuring the amount of leakage into the respirator.
Respiratory Protection Policy

*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):** Also known as airline respirators. An atmosphere-supplying respirator for which the source of breathing air is designed to be remotely located and supplied to the user by a pressurized airline.

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

*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.

**VII. GENERAL REQUIREMENTS**

Use of Respirators

A. S&C establishes procedures for the proper use of respirators with this respiratory protection program. These procedures include prohibiting conditions that may result in facepiece leakage, preventing users from removing respirators in hazardous environments, ensuring continued respirator operation throughout the shift, and establishing procedures for the use of respirators in atmospheres that are Immediately Dangerous to Life and Health (IDLH). These procedures include:

i. Employees or students with facial hair that interferes with the sealing surfaces of the respirator shall not be issued a tight-fitting respirator because there is not assurance that the respirator will fit under the conditions of use. Individuals who have been issued a respirator shall remain clean-shaven when required to wear a tight-fitting respirator.

ii. Employees or students who wear glasses that interfere with the sealing surface of a full-face respirator shall not be issued a tight-fitting respirator unless they can safely work without the aid of eye glasses. Exception: If provisions have been made for the acquisition of temple-less glasses that fit into the respirator facepiece, then a tight-fitting full facepiece respirator may be used.
iii. Negative and/or positive fit-checks shall be demonstrated in training and shall be performed by the respirator wearer each time the individual dons a tight-fitting respirator.

iv. Regular surveillance of the effectiveness of the respirator program will occur through periodic communications or on-site observations of workplaces requiring the use of respirators. Also, notations of any problems regarding the effectiveness of the respirators shall be communicated to S&C (or S&C designate) by respiratory users.

v. No workplace policies shall prohibit or impede individuals who wear respirators from leaving the work area should there develop either a significant problem with the respirator or a need to replace the filters or cartridges.

vi. Individuals who must leave a contaminated work area after a significant respirator failure shall not re-enter the work area without first assuring the proper functioning of the respirator.

vii. A change schedule for canisters and cartridges shall be implemented and based upon objective information or data that will ensure that canisters and cartridges are changed before the end of their service life. (An end of service life indicator on the canisters or cartridges may be used if available.) Change schedules shall be based upon objective data. Typical sources can include respirator manufacturers, industry organizations, and chemical characteristics.

Physician’s Written Opinion
A. No respiratory users shall be assigned to tasks requiring the use of a respirator unless a PLHCP determines that the individual is medically able to wear a respirator.

B. The PLHCP at a University of Illinois designated medical facility shall provide a written opinion as to the ability of an individual to wear a respirator.

C. The respiratory users, with assistance from their supervisor, will provide relevant information to the PLHCP regarding their job functions, expected work effort, and work tasks.

D. The PLHCP shall complete a medical evaluation form and submit this form to S&C.

E. Medical evaluations shall consist of administering a medical questionnaire or providing a physical examination that elicits the same information as the questionnaire.

i. Students shall submit a paper copy of the medical questionnaire (APPENDIX 1) to the McKinley Health Center.

ii. A medical release form must be sent (APPENDIX 2) with the medical questionnaire allowing the PLHCP to share their respiratory clearance decision with S&C.

iii. All student paperwork should be submitted to the following address:

1. McKinley Health Center
   C/O: David Lawrance, MD
   1109 S Lincoln
iv. All other personnel requiring medical clearance should follow the instructions listed in APPENDIX 4.

F. Medical evaluations will occur according to the following schedule:
   i. Before the initial fit testing and before the respirator is used for the first time.
   ii. At the frequency required by OSHA substance specific standards (ex. OSHA Formaldehyde Standard, 29 CFR 190.1048, which requires an annual physical exam for respirator wearers).
   iii. If an individual gives a positive response to any question among questions 1 – 8 of the Medical Questionnaire.
   iv. If the initial medical examination demonstrates the need for a follow-up medical examination. These follow-up exams must include any medical tests, consultations, or diagnostic procedures that the PLHCP deems necessary to make a final decision.
   v. Whenever a respirator user reports medical signs or symptoms that are related to the ability to use a respirator.
   vi. Whenever a PLHCP, supervisor, or respirator program administrator (S&C) informs the University that the individual needs to be reevaluated.
   vii. Whenever information from the Respiratory Protection Program, including observations made during fit testing and program evaluation, indicates a need for reevaluation.
   viii. If a change occurs in workplace conditions (e.g., physical work effort, protective clothing, temperature, etc.) that may result in a substantial increase in the physiological burden placed upon respirator users.
   ix. It is recommended, but not required, that a medical clearance be performed every 5 years.

Voluntary Use
A. S&C shall make the determination if respirator use is voluntary or if it is necessary.
B. For voluntary use, S&C shall make a reasonable effort to ensure that the respirator does not interfere with the respiratory users ability to work safely and its use does not create a hazard.
C. All voluntary respirator wearer shall sign a notice of responsibilities (APPENDIX 8) before voluntary use is permitted.
D. For those voluntarily using a filtering facepiece (dust mask) a written respiratory protection program (medical evaluation, fit testing, training, etc.) shall not be required.
E. Use of any other type of respirator, even when voluntary on the part of the respiratory users, will require all elements of a written program.

Selection
A. Selection of a proper respirator will only occur after a thorough assessment has been made as to the potential exposure of individuals to harmful contaminants in
the workplace atmosphere. S&C or its designate will conduct hazard evaluations of the workplace.

B. Respirator selection shall be determined by S&C in conjunction with the supervisor and/or department. Selection of respirators shall be based on the following criteria:
   i. The nature of the hazardous operation/process and assumed or measured hazardous exposure levels.
   ii. The nature of the respiratory hazard, including physical and chemical properties, adverse health effects of the hazard, and warning properties of the hazard.
   iii. The characteristics and limitations of available respirators, including assigned protection factor.
   iv. The period of time for which the respirator must be worn.
   v. The medical evaluation from the PLHCP.
   vi. Fit testing results.

C. If a contaminant is not regulated by a substance-specific standard that requires air monitoring, other means can be used to estimate workplace exposures.
   a. Use objective data (industry studies, trade association tests conducted by chemical manufacturers, etc.) indicating that air contaminants cannot be released into the workplace in airborne concentrations that are immediately dangerous to life and health.
      i. Supervisors must document the use of this objective data in their unit-specific programs.
   b. The application of mathematical approaches may be used, such as physical and chemical properties of contaminants, combined with information on room dimensions, air exchange rates, chemical release rates, etc.
   c. Where the respiratory hazard cannot be identified or a reasonable estimate of the employee exposure cannot be determined then the atmosphere will be considered to be IDLH.

D. Only those respirators that are approved by NIOSH shall be used.

Training
A. S&C or an S&C approved training program shall be used to deliver respirator training.
B. Training shall be provided before the required use of a respirator.
C. Training shall be administered annually or more often if S&C, it’s designate, or a supervisor determines retraining is necessary.
   a. Retraining may be necessary when:
      i. Insuring the safe use of the respirator.
      ii. In response to changes in the workplace.
      iii. In response to changes in the type of respirator.
D. After training, all respiratory users must be able to demonstrate knowledge of at least the following:
i. The reasons for the need of the respirator, and how improper fit, usage, or maintenance can compromise the protective effect of the unit.

ii. The limitations and capabilities of the respirator.

iii. How to use the respirator effectively in emergency situations in which the respirator malfunctions.

iv. How to properly inspect, put-on and remove, use, and check the seals of the respirator.

v. The procedures for maintenance and storage of the respirator.

vi. How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.

vii. The responsibilities of the university and the individual regarding respiratory protection.

E. Training records shall be kept by the department and S&C. Departmental training sign in forms shall be forwarded to S&C (APPENDIX 6).

Fit Testing

A. Fit testing is required for all individuals using negative or positive pressure, tight-fitting respirators. A fit test is not required for voluntary user or for escape-only respirators.

B. Fit-testing will not be conducted until the respirator wearer has received PLHCP’s written approval to wear a respirator.

C. Fit testing procedures shall follow those listed in OSHA (29 CFR 1910.134 appendix A).

D. Before an individual will be required to use any respirator with a negative- or positive-pressure tight-fitting facepiece, they shall be fit-tested with the same make, model, style, and size of respirator that will be used.

E. Individuals using a tight-fitting facepiece respirator will pass either a qualitative fit test (QLFT) or a quantitative fit test (QNFT). After the initial fit test, either the QLFT or the QNFT will be performed annually.

F. An additional fit test shall be done whenever the respirator user, S&C, the PLHCP, or the supervisor reports visual observations of changes in the individual’s physical condition that could affect respirator fit. These conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or obvious changes in body weight.

G. Individuals have the responsibility to immediately notify the supervisor or S&C that the fit of the respirator is unacceptable. If so, they shall be given a reasonable opportunity to select a different respirator facepiece and to be retested.

H. QLFT shall be used to fit test negative pressure air-purifying respirators that must achieve a fit factor of 100 or less (see Table 1 below).

I. If the fit factor, as determined through QNFT protocol, is equal to or greater than 100 for tight-fitting half facepieces, or equal to or greater than 500 for tight-fitting full facepieces, the QNFT has been passed with that respirator.
J. Fit testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered air-purifying respirators shall be accomplished by performing quantitative or qualitative fit testing in the negative pressure mode, regardless of the mode of operation (negative or positive pressure) that is used for respiratory protection.
   a. Qualitative fit testing of these respirators shall be accomplished by temporarily converting the respirator user's actual facepiece into a negative pressure respirator with appropriate filters, or by using an identical negative pressure air-purifying respirator facepiece with the same sealing surfaces as a surrogate for the atmosphere-supplying or powered air-purifying respirator facepiece.

K. User Seal Check Procedures. Individuals using a tight-fitting respirator shall perform a user seal check to ensure that an adequate seal is achieved each time when putting on the respirator. Either the positive and negative pressure checks listed in this section or the respirator manufacturer’s recommended user seal check method shall be used. User seal checks are not substitutes for qualitative or quantitative fit tests.

L. Facepiece Positive and/or negative Pressure Checks
   i. Positive pressure checks. Close off the exhalation valve and exhale gently into the facepiece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the facepiece without any evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.

   ii. Negative pressure check. Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s), inhale gently so that the facepiece collapses slightly, and hold the breath for ten seconds. The design of the inlet opening of some cartridges cannot be effectively covered with the palm of the hand. The test can be performed by covering the inlet opening of the cartridge with a thin latex or nitrile glove. If the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

M. Manufacturer’s Recommended User Seal Check Procedures: The respirator manufacturer’s recommended procedures for performing a user seal check may be used instead of the positive and/or negative pressure seal check procedures provided that the employer demonstrates that the manufacturers’ procedures are equally effective.

| Table 1 |
| Acceptable Fit-Testing Methods |
|----------|----------|
| QLFT     | QNFT     |
| Half-Face, Negative Pressure, APR (<100 fit factor) | Yes     | Yes    |
| Full-Face, Negative Pressure APR (<100 fit factor) used in |         |        |
Use of Respirators in Immediately Dangerous to Life and Health (IDLH) Atmospheres
A. Work atmospheres that are IDLH are those that pose an immediate threat to life, could cause irreversible health effects, or could impair an individual’s ability to escape from a dangerous atmosphere.
B. The following respirators shall be used in an IDLH atmosphere:
   a. A full facepiece, pressure demand self contained breathing apparatus (SCBA) certified by NIOSH for a minimum service life of thirty minutes, or
   b. A combination full facepiece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.
C. Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used.
D. All oxygen-deficient atmospheres shall be considered IDLH.
E. Supervisory staff and principal investigators must be prepared for emergency rescue or respirator failure whenever employees or students are working inside of an IDLH atmosphere.
F. **Buddy system.** In IDLH atmospheres or potential IDLH atmospheres at least one additional worker properly equipped with respiratory protection shall be present.
G. **Communications.** Communications (visual, voice, or signal line) shall be maintained between workers present in IDLH atmospheres.
H. **Rescue.** Stand-by workers must be available with suitable rescue equipment: pressure demand or other positive pressure SCBAs or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA, safety harnesses and safety lines (for removing persons working in IDLH atmospheres).

**Inspection**
A. All respirators shall be inspected before each use and during cleaning.
B. Respirators shall be checked for tightness of connection and general condition of the various parts including, but not limited to: the facepiece, head straps, valves, connecting tube, cartridges, and a check of elastomeric parts for pliability and signs of deterioration.
C. Emergency use respirators:
Respiratory Protection Policy

a. Shall be inspected at least monthly and in accordance with the manufacturer’s recommendations.
b. Shall be checked for proper function before and after each use.
c. Emergency escape-only respirators shall be inspected before being carried into the workplace for use.
d. Shall have documentation that lists:
   i. The date the inspection was performed.
   ii. The name (or signature) of the person who made the inspection.
   iii. The findings and required remedial action needed.
   iv. A serial number or other means of identifying the inspected respirator.

e. All information provided in ‘d’ above shall be on a tag or label that is attached to the storage compartment for the respirator, is kept with the respirator, or is included in inspection reports stored as paper or electronic files. This information shall be maintained until replaced following a subsequent inspection.

D. Breathing cylinders of any self-contained breathing apparatus (SCBA) shall be inspected to assure that the cylinder pressure is maintained at 90% of the manufacturer’s recommended pressure level and that regulator and low-pressure warning devices function properly.

E. Respirators that do not meet applicable inspection criteria shall be immediately removed from service.

Cleaning and Disinfecting

A. Cleaning and disinfecting procedure.
   a. Remove filters, cartridges, or canisters. Disassemble facepieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
   b. Wash components in warm (110 deg. F maximum) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
   c. Rinse components thoroughly in clean, warm (110 deg. F maximum), preferably running water. Drain.
   d. When the cleaner used does not contain a disinfecting agent, respirator components should be disinfected by using a respirator approved disinfectant wipe or by the procedure listed below:
      i. Run 2 gallons of warm water in a bucket. The water temperature should not be above 110 deg. F.
      ii. Add 1 oz. of household bleach per 2 gallons of water to make a hypochlorite solution.
      iii. Immerse the components in the hypochlorite solution for 2 minutes.
   e. Rinse components thoroughly in clean, warm (110 deg. F maximum), 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, disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.

f. Components should be hand-dried with a clean lint-free cloth and then air-dried in a clean environment for 30 minutes. Keep the respirator out of sunlight and direct heat.

g. Reassemble facepiece, replacing filters, cartridges, and canisters where necessary.

h. Test the respirator to ensure that all components work properly.

B. The manufacturer’s recommended procedures can be used for cleaning and disinfecting the respirator as long as they are equally effective as the procedures listed above. Equivalent effectiveness simply means that the procedures used must ensure that the respirator is properly cleaned and disinfected in a manner that prevents damage to the respirator and does not cause harm to the user.

C. All non-disposable respirators shall be cleaned and disinfected after each use.

Repairs and Replacement Parts
A. Where air-purifying respirators are routinely used, filters and cartridges shall be replaced on a regular basis. When filters become difficult to breathe through they shall be replaced. Where it is evident by odor or irritant properties that a contaminant has broken through the filtering parts, the chemical cartridges shall be replaced immediately.

B. Only persons appropriately trained to perform such operations, using parts designed for the particular respirator shall make repairs. No repairs shall be performed that are outside the manufacturer’s recommendations concerning the type and extent of repairs that can be performed. Only the manufacturer or appropriately trained technician shall conduct repairs of reducing or admission valves on an SCBA.

Storage
A. Respirators shall be properly stored to protect against damage, contamination, excessive moisture, extreme temperatures, sunlight, and damaging chemicals.

B. Emergency use respirators shall be stored in compartments or in covers, both of which shall be clearly marked as containing the emergency respirators. They shall be stored in compartments that will protect them from weathering, contamination, and deterioration.

C. Non-emergency respirators shall be stored in plastic bags or in other airtight storage mediums.

D. If cartridges are stored for reuse, they shall be placed in a zip-lock bag with the date indicating when the cartridge was put into service and amount of time the cartridge has been exposed to a hazard (e.g., 1 hr, 2 hrs, 2.5 hrs, etc.).

E. Organic and/or acid vapor cartridges shall be replaced: after being exposed to an organic/acid vapor hazard for 8 hours, when the end-of-service-life indicator
indicates replacement, and/or when they are no longer effective (vapor breakthrough, etc.).

Breathing Air Quality and Use

A. Compressed breathing air must meet at least the requirements for Grade D breathing air. The American National Standards Institute (ANSI) Compressed Gas Association (CGA) g.7-1 – 1989 specifies the contents of Grade D breathing air as: oxygen (volume/volume) of 19.5% to 23.5%; Hydrocarbon (condensed) of 5 mg/m³ of air or less; carbon monoxide of 10 ppm or less; carbon dioxide of 1,000 ppm or less; and the lack of a noticeable odor.

B. Air cylinders used to supply breathing air shall be marked with a NIOSH approval label. Cylinders of purchased breathing air shall have a certificate of analysis from the supplier that the breathing air meets the required Grade D air and moisture content. They shall also certify:
   a. The moisture content in the cylinder shall not exceed a dew point of -50 deg.F (-45.6 deg.C) at 1 atmosphere pressure.

C. Compressors used to supply breathing air to respirators shall be constructed and situated so as to:
   a. Prevent entry of contaminated air into the air-supply system
   b. Minimize moisture content so that the dew point at 1 atmosphere pressure is 10 degrees F (5.56 deg.C) below the ambient temperature
   c. Have suitable in-line air-purifying sorbent beds and filters to further ensure breathing air quality. Sorbent beds and filters shall be maintained and replaced or refurbished periodically following the manufacturer’s instructions.
   d. Have a tag containing the most recent change date and the signature of the person authorized by the employer to perform the change. The tag shall be maintained at the compressor.
   e. For compressors that are not oil-lubricated, it shall be staged to ensure that carbon monoxide levels in the breathing air do not exceed 10 ppm.
   f. For oil-lubricated compressors, there shall be a high-temperature or carbon monoxide alarm, or both, to monitor carbon monoxide levels. If only high-temperature alarms are used, the air supply shall be monitored at intervals sufficient to prevent carbon monoxide in the breathing air from exceeding 10 ppm.

D. All breathing air couplings must be incompatible with those of non-respirable air or other gases used on the campus to prevent inadvertent servicing of air line respirators with non-respirable gases or oxygen

Recordkeeping

A. Medical evaluations, training, and fit testing records shall be established and maintained for every individual required to wear a respirator. Copies of all three records shall be submitted to S&C no later than 30 days after their receipt by the business unit.
B. These records shall be maintained for 30 years beyond the last date of employment/enrollment of the respiratory users.
C. Records for substance-specific OSHA Standards shall be maintained according to the specific OSHA Standard.
D. Records on respirator inspection for positive pressure respirators (airline or SCBA) shall be maintained until replaced by a more recent inspection record. Records on maintenance on a positive pressure respirator shall be maintained until the respirator is no longer in service.

Program Evaluation
A. This Respiratory Protection Program will be reviewed annually by S&C. The written standard operating procedures specific to the units utilizing respirators should be reviewed and updated by these units at least annually and more frequently as hazards, tasks, procedures and/or equipment change.
APPENDIX 1 – Respiratory Medical Questionnaire

The following information must be provided by every person who has been selected to use a respirator (please print).

Name: ___________________________________________  UIN: __________________

Today’s date: _______________  Age: _______________  Sex: _______________

Height: _______ ft. _______ in.  Weight: ____________ lbs.

Job title: ___________________________________________________________

Phone number: _____________________________  Best time to contact you: ___________

Has your department told you how to contact the health care professional who will review this questionnaire (circle one):  Yes  No

Check the type of respirator you will use (you can check more than one category):

_____ N, R, or P disposable respirator (filter-mask, non-cartridge type only)
_____ Half mask elastomeric respirator (cartridge type)
_____ Powered-air purifying type (PAPR)
_____ Other type (full-facepiece type, supplied-air, self-contained breathing apparatus)

How often will use a respirator (circle one):

Daily  Weekly  Monthly  Semi-annually

How long will you wear your respirator (circle one):  <15min  15-30min  <1hr  >1hr

Are you using your respirator for rescue or escape from a hazardous environment (circle one):  Yes  No

List any additional protective clothing that you will wear with your respirator: ____________________________

What will the high and low temperature and humidity extremes be while wearing your respirator:

____________________________________________________________

Have you worn a respirator before (circle one):  Yes  No

If "yes," what type(s):__________________________________________________________________________
Questionnaire

All questions listed below must be answered by every employee who has been selected to use a respirator (please circle "yes" or "no").

1. Do you currently smoke tobacco, or have you smoked tobacco in the last month:  
   Yes  No

2. Have you ever had any of the following conditions?
   a. Seizures (fits):  
      Yes  No
   b. Diabetes (sugar disease):  
      Yes  No
   c. Allergic reactions that interfere with your breathing:  
      Yes  No
   d. Claustrophobia (fear of closed-in places):  
      Yes  No
   e. Trouble smelling odors:  
      Yes  No

3. Have you ever had any of the following pulmonary or lung problems?
   a. Asbestosis:  
      Yes  No
   b. Asthma:  
      Yes  No
   c. Chronic bronchitis:  
      Yes  No
   d. Emphysema:  
      Yes  No
   e. Pneumonia:  
      Yes  No
   f. Tuberculosis:  
      Yes  No
   g. Silicosis:  
      Yes  No
   h. Pneumothorax (collapsed lung):  
      Yes  No
   i. Lung cancer:  
      Yes  No
   j. Broken ribs:  
      Yes  No
   k. Any chest injuries or surgeries:  
      Yes  No
   l. Any other lung problem that you've been told about:  
      Yes  No

4. Do you currently have any of the following symptoms of pulmonary or lung illness?
   a. Shortness of breath:  
      Yes  No
   b. Shortness of breath:  
      a. when walking fast on level ground:  
         Yes  No
      b. when walking up a slight hill or incline:  
         Yes  No
      c. when walking with other people at an ordinary pace on level ground:  
         Yes  No
   c. Have to stop for breath when walking at your own pace on level ground:  
      Yes  No
   d. Shortness of breath when washing or dressing yourself:  
      Yes  No
   e. Shortness of breath that interferes with your job:  
      Yes  No
   f. Coughing that produces phlegm (thick sputum):  
      Yes  No
   g. Coughing that wakes you early in the morning:  
      Yes  No
   h. Coughing that occurs mostly when you are lying down:  
      Yes  No
   i. Coughing up blood in the last month:  
      Yes  No
   j. Wheezing:  
      Yes  No
   k. Wheezing that interferes with your job:  
      Yes  No
1. Chest pain when you breathe deeply:  
5. Have you ever had any of the following cardiovascular or heart problems?
   a. Heart attack:  
   b. Stroke:  
   c. Angina:  
   d. Heart failure:  
   e. Swelling in your legs or feet (not caused by walking):  
   f. Heart arrhythmia (heart beating irregularly):  
   g. High blood pressure:  
   h. Any other heart problem that you’ve been told about:
2. Any other symptoms that you think may be related to lung problems:  
6. Have you ever had any of the following cardiovascular or heart symptoms?
   a. Frequent pain or tightness in your chest:  
   b. Pain or tightness in your chest during physical activity:  
   c. Pain or tightness in your chest that interferes with your job:  
   d. In the past two years, have you noticed your heart skipping/missing a beat:  
   e. Heartburn or indigestion that is not related to eating:  
   f. Any other symptoms that you think are related to heart/circulation problems:
3. Have you ever had any of the following cardiovascular or heart problems:
   a. Heart attack:  
   b. Stroke:  
   c. Angina:  
   d. Heart failure:  
   e. Swelling in your legs or feet (not caused by walking):  
   f. Heart arrhythmia (heart beating irregularly):  
   g. High blood pressure:  
   h. Any other heart problem that you’ve been told about:
4. Have you ever had any of the following cardiovascular or heart symptoms:
   a. Frequent pain or tightness in your chest:  
   b. Pain or tightness in your chest during physical activity:  
   c. Pain or tightness in your chest that interferes with your job:  
   d. In the past two years, have you noticed your heart skipping/missing a beat:  
   e. Heartburn or indigestion that is not related to eating:  
   f. Any other symptoms that you think are related to heart/circulation problems:
7. Do you currently take medication for any of the following problems:
   a. Breathing or lung problems:  
   b. Heart trouble:  
   c. Blood pressure:  
   d. Seizures (fits):
8. If you've used a respirator, have you ever had any of the following problems? (If you've never used a respirator, check (a) and go to question 9)
   a. Never used a respirator  
   b. Eye irritation:  
   c. Skin allergies or rashes:  
   d. Anxiety:  
   e. General weakness or fatigue:  
   f. Any other problem that interferes with your use of a respirator:
9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire:
10. Questions 10 to 15 below must be answered by every student, employee, faculty, and/or staff who has been selected to use either a full-facepiece respirator or a self-contained breathing apparatus
(SCBA). For respiratory users who have been selected to use other types of respirators, answering these questions is voluntary.

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

11. Do you currently have any of the following vision problems?
   a. Wear contact lenses:  
      Yes  No
   b. Wear glasses:  
      Yes  No
   c. Color blind:  
      Yes  No
   d. Any other eye or vision problem:  
      Yes  No

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

13. Do you currently have any of the following hearing problems?
   a. Difficulty hearing:  
      Yes  No
   b. Wear a hearing aid:  
      Yes  No
   c. Any other hearing or ear problem:  
      Yes  No

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

15. Do you currently have any of the following musculoskeletal problems?
   a. Weakness in any of your arms, hands, legs, or feet:  
      Yes  No
   b. Back pain:  
      Yes  No
   c. Difficulty fully moving your arms and legs:  
      Yes  No
   d. Pain or stiffness when you lean forward or backward at the waist:  
      Yes  No
   e. Difficulty fully moving your head up or down:  
      Yes  No
   f. Difficulty fully moving your head side to side:  
      Yes  No
   g. Difficulty bending at your knees:  
      Yes  No
   h. Difficulty squatting to the ground:  
      Yes  No
   i. Climbing a flight of stairs or a ladder carrying more than 25 lbs:  
      Yes  No
   j. Any other muscle or skeletal problem that interferes with using a respirator:  
      Yes  No
APPENDIX 2 – Student Medical Records Release

Mckinley Health Center
University of Illinois at Urbana-Champaign
Medical Records Department
1109 South Lincoln Avenue
Urbana, IL 61801
Phone (217) 333-2720 Fax (217) 244-6495

Authorization for Disclosure of Confidential Health Care Information

Name (Please Print) ____________________________ UIN ____________________________

Date of Birth ___________ Current Phone No. ___________ Date of Request ___________

I authorize McKinley Health Center to release/receive (circle one) information from my patient records as described below (specify who records will be sent to or received from):

Agency/Facility/Person: Division of Safety & Compliance
Address: 1501 South Oak Street, Physical Plant Serv. Bldg., MC-800
City, State, Zip: Champaign, IL 61820

Phone # ___________ Fax # 244-3370 *For Health Care Facility Fax Use Only

Specific Records to be Disclosed:
- Immunization Records
- Clinic Notes
- Laboratory Reports
- X-ray Reports
- X-ray Images
- Allergy Records
- Physical Exam
- Verbal Communication
- Other: Specify: Respiratory Medical Clearance

Approximate date(s) of treatment:

Purpose of Disclosure:
- Continuing medical treatment
- School admission requirements
- Volunteer Work
- Other: OSHA Respiratory Fit Test

By checking the box or boxes below, you are authorizing the release of the following information:
- HIV/AIDS (as defined by Illinois Statute) – will not be released unless specifically indicated.
- Alcohol and/or drug abuse treatment information protected under the regulations in 42 Code of Federal Regulations will not be released unless specifically indicated.
- Mental Health records (as defined by Illinois Mental Health and Developmental Disabilities Confidentiality Act) – will not be released unless specifically indicated.

I understand the following provisions:
- I have the right to inspect and receive copies of information to be disclosed.
- I have the right to revoke this consent at any time.
- Revoking this consent shall have no effect on disclosures made before the revocation of consent.
- Any revocation of consent must be submitted in writing to the Medical Records Unit and signed by the person who gave the consent.
- The confidential information disclosed and used pursuant to this Authorization may be subject to redisclosure by the recipient and no longer protected by law.**
- It has been explained to me that if I refuse to consent to this disclosure of information, the following are the consequences: (specify if any)
- This authorization expires 90 calendar days after it is signed or upon the following specific date, event or condition:

Signature of Patient or Consenting Individual ____________________________ Date ___________

If signature is not of Patient, indicate relationship ____________________________

Signature of Witness ____________________________ Date ___________

* NOTICE TO RECEIVING AGENCY/FACILITY/PRESON: Under the provisions of the Illinois Mental Health and Developmental Disabilities Confidentiality Act, you may not disclose any records disclosed pursuant to said Act unless the person who consented to this disclosure specifically consents to such redisclosure.

For Office Use Only: Mail: Pick-up (date) Fax: RUSH: Appt Date

Records Completed:

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<td>6) Reviewed records</td>
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MHA/MH review: Approved: Not approved: Signature: Date: 8/25/10 bnh
APPENDIX 3 – Employee, Faculty, and Staff Medical Questionnaire

Carle Clinic Association
602 West University Avenue, Urbana, IL 61801
Phone: (217) 383-3311

In accordance with OSHA regulations, all medical information will be treated confidential. Specific details of medical conditions will not be released unless there is an appropriate medical release signed or there is a specific “need to know” issue that may affect your safety or the safety of those in your work environment. To maintain confidentiality, your employer or supervisor must not look at or review your answers, and your employer must tell you how to deliver or send this questionnaire to the health care professional who will review it.

Section 1. (Mandatory)
The following information must be provided by every employee who has been selected to use any type of respirator (please print).

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

Section 2. (Mandatory)
Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator (please check “yes” or “no”).

1. Do you currently smoke tobacco, or have you smoked tobacco in the last month? ☐ Yes ☐ No
2. Have you ever had any of the following?
   a. Seizures (fits) ☐ Yes ☐ No
   b. Diabetes (sugar disease) ☐ Yes ☐ No
   c. Allergic reactions that interfere with your breathing ☐ Yes ☐ No
   d. Claustrophobia (fear of closed-in places) ☐ Yes ☐ No
   e. Trouble smelling odors ☐ Yes ☐ No

X1136-0299
3. Have you ever had any of the following pulmonary or lung problems?
   a. Asbestosis ................................................................. ☐ Yes ☐ No
   b. Asthma ........................................................................... ☐ Yes ☐ No
   c. Chronic bronchitis ......................................................... ☐ Yes ☐ No
   d. Emphysema ................................................................. ☐ Yes ☐ No
   e. Pneumonia ....................................................................... ☐ Yes ☐ No
   f. Tuberculosis ..................................................................... ☐ Yes ☐ No
   g. Silicosis ........................................................................... ☐ Yes ☐ No
   h. Pneumothorax (collapsed lung) ......................................... ☐ Yes ☐ No
   i. Lung cancer ........................................................................ ☐ Yes ☐ No
   j. Broken ribs ......................................................................... ☐ Yes ☐ No
   k. Any chest injuries or surgeries ........................................... ☐ Yes ☐ No
   l. Any other lung problem that you’ve been told about ......... ☐ Yes ☐ No

4. Do you currently have any of the following symptoms of pulmonary or lung illness?
   a. Shortness of breath .......................................................... ☐ Yes ☐ No
   b. Shortness of breath when walking fast on level ground or walking up a slight hill or incline ........................................................................... ☐ Yes ☐ No
   c. Shortness of breath when walking with other people at an ordinary pace on level ground .......................................................... ☐ Yes ☐ No
   d. Have to stop for breath when walking at your own pace on level ground ......................................................................................... ☐ Yes ☐ No
   e. Shortness of breath when washing or dressing yourself ....... ☐ Yes ☐ No
   f. Shortness of breath that interferes with your job ................. ☐ Yes ☐ No
   g. Coughing that produces phlegm (thick sputum) ................. ☐ Yes ☐ No
   h. Coughing that wakes you early in the morning ................. ☐ Yes ☐ No
   i. Coughing that occurs mostly when you are lying down ...... ☐ Yes ☐ No
   j. Coughing up blood in the last month ................................... ☐ Yes ☐ No
   k. Wheezing ........................................................................... ☐ Yes ☐ No
   l. Wheezing that interferes with your job .............................. ☐ Yes ☐ No
   m. Chest pain when you breathe deeply ............................... ☐ Yes ☐ No
   n. Any other symptoms that you think may be related to lung problems .......................................................... ☐ Yes ☐ No

5. Have you ever had any of the following cardiovascular or heart problems?
   a. Heart attack ........................................................................ ☐ Yes ☐ No
   b. Stroke ................................................................................... ☐ Yes ☐ No
   c. Angina ................................................................................. ☐ Yes ☐ No
   d. Heart failure ......................................................................... ☐ Yes ☐ No
   e. Swelling in your legs or feet (not caused by walking) ......... ☐ Yes ☐ No
   f. Heart arrhythmia (heart beating irregularly) ..................... ☐ Yes ☐ No
   g. High blood pressure ............................................................ ☐ Yes ☐ No
   h. Any other heart problem that you’ve been told about ......... ☐ Yes ☐ No

6. Have you ever had any of the following cardiovascular or heart symptoms?
   a. Frequent pain or tightness in your chest ......................... ☐ Yes ☐ No
   b. Pain or tightness in your chest during physical activity ....... ☐ Yes ☐ No
   c. Pain or tightness in your chest that interferes with your job ......................................................................................... ☐ Yes ☐ No
   d. In the past two years, have you noticed your heart skipping or missing a beat .......................................................... ☐ Yes ☐ No
   e. Heartburn or indigestion that is not related to eating ......... ☐ Yes ☐ No
   f. Any other symptoms that you think may be related to heart or circulation problems .......................................................... ☐ Yes ☐ No
7. Do you currently take medication for any of the following problems?
   a. Breathing or lung problems
   b. Heart trouble
   c. Blood pressure
   d. Seizures (fits)
   - Questions to be answered by every employee who has been selected to use either a full-facepiece respirator or a self-contained breathing apparatus (SCBA). For employees who have been selected to use other types of respirators, answering these questions is voluntary.

8. If you’ve used a respirator, have you ever had any of the following problems?
   (If you’ve never used a respirator, check here □ and skip to question #9.)
   a. Eye irritation
   b. Skin allergies or rashes
   c. Anxiety
   d. General weakness or fatigue
   e. Any other problem that interferes with your use of a respirator

9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire?
   - Questions to be answered by every employee who has been selected to use either a full-facepiece respirator or a self-contained breathing apparatus (SCBA). For employees who have been selected to use other types of respirators, answering these questions is voluntary.

10. Have you ever lost vision in either eye (temporarily or permanently)?

11. Do you currently have any of the following vision problems?
   a. Wear contact lenses
   b. Wear glasses
   c. Color blind
   d. Any other eye or vision problem

12. Have you ever had an injury to your ears, including a broken ear drum?

13. Do you currently have any of the following hearing problems?
   a. Difficulty hearing
   b. Wear a hearing aid
   c. Any other hearing or ear problem

14. Have you ever had a back injury?

15. Do you currently have any of the following musculoskeletal problems?
   a. Weakness in any of your arms, hands, legs, or feet
   b. Back pain
   c. Difficulty fully moving your arms and legs
   d. Pain or stiffness when you lean forward or backward at waist
   e. Difficulty fully moving your head up or down
   f. Difficulty fully moving your head side to side
   g. Difficulty bending at your knees
   h. Difficulty squatting to the ground
   i. Difficulty climbing a flight of stairs or a ladder carrying more than 25 lbs
   j. Any other muscle or skeletal problem that interferes with using a respirator
Part B

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

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

   If “yes”, do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you’re working under these conditions? □ Yes □ No

2. At work or at home, have you ever been exposed to hazardous solvents, hazardous airborne chemicals (e.g., gasses, fumes, or dust), or have you come into contact with hazardous chemicals? □ Yes □ No

   If “yes”, name the chemicals if you know them

3. Have you ever worked with any of the materials, or under any of the conditions, listed below?
   a. Asbestos □ Yes □ No
   b. Silica (e.g., grinding or welding this material) □ Yes □ No
   c. Tungsten/cobalt □ Yes □ No
   d. Beryllium □ Yes □ No
   e. Aluminum □ Yes □ No
   f. Coal (for example, mining) □ Yes □ No
   g. Iron □ Yes □ No
   h. Tin □ Yes □ No
   i. Dusty environments □ Yes □ No
   j. Any other hazardous exposures □ Yes □ No

   If “yes”, describe these exposures

4. List any second jobs or side businesses you have

5. List your previous occupations

6. List your current and previous hobbies

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

   If “yes”, were you exposed to biological or chemical agents (either in training or combat) □ Yes □ No

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

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

   If “yes”, name the medications if you know them

10. Will you be using any of the following items with your respirator(s)?
   a. HEPA filters □ Yes □ No
   b. Canisters (for example, gas masks) □ Yes □ No
   c. Cartridges □ Yes □ No
11. How often are you expected to use the respirator(s)? (check "yes" or "no" for all answers that apply to you)
   a. Escape only (no rescue) ................................................................. Yes No
   b. Emergency rescue only ............................................................... Yes No
   c. Less than 5 hours per week ......................................................... Yes No
   d. Less than 2 hours per day .......................................................... Yes No
   e. 2 to 4 hours per day ................................................................. Yes No
   f. Over 4 hours per day ................................................................. Yes No

12. During the period you are using the respirator(s), is your work effort:
   a. Light (less than 200 kcal per hour) ............................................... Yes No
      If "yes", how long does this period last during the average shift _____ hrs. _____ mins.
      Examples of a light work effort are sitting while writing, typing, drafting, or performing light assembly work; or standing while operating a drill press (1-3 lbs.) or controlling machines.

   b. Moderate (200 to 300 kcal per hour) ........................................... Yes No
      If "yes", how long does this period last during the average shift _____ hrs. _____ mins.
      Examples of a moderate work effort are sitting while nailing or filing, driving a truck or bus in urban traffic; standing while drilling, nailing, performing assembly work, or transferring a moderate load (about 35 lbs.) at trunk level; walking on a level surface about 2 mph or down a 5-degree grade about 3 mph; or pushing a wheelbarrow with a heavy load (about 100 lbs.) on a level surface.

   c. Heavy (above 350 kcal per hour) ..................................................... Yes No
      If "yes", how long does this period last during the average shift _____ hrs. _____ mins.
      Examples of a heavy work effort are lifting a heavy load (about 50 lbs.) from the floor to your waist or shoulder, working on a loading dock; shoveling; standing while bricklaying or chipping castings; walking up an 8-degree grade about 2 mph; climbing stairs with a heavy load (about 50 lbs.).

13. Will you be wearing protective clothing and/or equipment (other than the respirator) when you’re using your respirator? Yes No
    If "yes", describe the protective clothing and/or equipment.

14. Will you be working under hot conditions? (temperature exceeding 77°F) Yes No

15. Will you be working under humid conditions? Yes No

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

17. Describe any special or hazardous conditions you might encounter when you’re using your respirator(s)
   (for example, confined spaces, life-threatening gasses)
18. Provide the following information, if you know it, for each toxic substance that you'll be exposed to when you're using your respirator(s):

Name of the first toxic substance ____________________________

Estimated maximum exposure level per shift ____________________

Duration of exposure per shift ________________________________

Name of the second toxic substance ____________________________

Estimated maximum exposure level per shift ____________________

Duration of exposure per shift ________________________________

Name of the third toxic substance ____________________________

Estimated maximum exposure level per shift ____________________

Duration of exposure per shift ________________________________

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

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

________________________________________________________________________

________________________________________________________________________
APPENDIX 4 – Employee, Faculty, and Staff Medical Clearance Procedure

The UIUC Medical Surveillance Program has been implemented to meet regulatory requirements, guidelines or established standards of practice to help prevent occupational disease and to protect the health and safety of UIUC employees. The following procedure should be used for the scheduling and invoicing of medical examinations from the Occupational Medicine Department at Carle Clinic.

Please follow the steps listed below in order to obtain employee medical examinations.

1. Contact the F&S Service Office (333-0340) to secure a Work Order (WO) for billing purposes and charge to your department’s C-FOAPAL.
2. Provide the Service Office the name of the Departmental Contact who will supply the names of the employees and the type of examinations the employees need (i.e. respirator physical, hazardous materials worker physical, blood lead levels, etc.).
3. The Division of Safety and Compliance (S&C) will contact the Departmental Contact to discuss the type of examinations required and obtain the names and UIINs of employees requiring medical examinations.
4. S&C will process billing release forms for each of the employees.
5. S&C will notify Carle Clinic of the names of employees and the type of medical evaluations that are needed.
6. S&C will notify the Departmental Contact that the employees can make their appointments for the medical exam with the Occupational Medicine Department (217-383-3077). They should inform Carle that they are a University employee.
7. After completing the medical examination, Carle Clinic will send a copy of the Medical Certification to S&C. The Departmental Contact will receive a copy of the certification from S&C.


If additional information is required, please contact the Medical Surveillance Coordinator at 217-265-9828.
APPENDIX 5 – Respiratory Protection Program Standard Operating Procedures

Respiratory Protection Standard Operating Procedures
For __________________________________________

It is the policy of the above-mentioned unit to comply with the University of Illinois Respiratory Protection Program. The purpose of this document is to complement the Campus program with site-specific written standard operating procedures.

PROGRAM ADMINISTRATION

The University of Illinois recognizes the fact that supervisors are not necessarily experts in the area of respiratory protection. However, as outlined in Section V/B - 1.2 and V/B – 1.3 of the Campus Administrative Manual, it is the supervisor's responsibility to assure "that required equipment and personal protective devices are provided, maintained and used" by those supervised. S&C and other qualified personnel will assist supervisors and individuals in fulfilling these obligations upon request.

The following individual has responsibility for the administration of respiratory protection in the above-mentioned unit. It is the responsibility of this person to supervise the use of respirators and to ensure that respirators are used when they are required and in a manner in which the wearer has been trained.

__________________________________________
(Name)                                        (Title)

SELECTION

Respirator types selected for use (include manufacturer and model number):

________________________________________________________________________

Cartridges and filters to be worn and hazard:

(Cartridge type or air source) (Hazards)

(Cartridge type or air source) (Hazards)

MEDICAL EVALUATIONS

A determination of the capability of each individual to physically and psychologically perform his or her normal work duties while wearing a respirator is made by a licensed physician from the following medical provider:

__________________________________________.
Copies of the Physician’s Written Opinion stating that a licensed physician has determined an individual capable of wearing a respirator are found in the individual's personnel file in the following location:
__________________________________________________________.

**RESPIRATOR TRAINING AND FIT TESTING**

Records of training and fit testing for the individuals in this unit who will be wearing respirators can be found in the following location:
__________________________________________________________.

**INSPECTION AND MAINTENANCE OF SHARED OR EMERGENCY USE RESPIRATORS**

The following person is responsible for the overall maintenance and inspection of respirators that are shared or for emergency-use:
__________________________________________________________.

Emergency-use respirators are found in the following locations:
__________________________________________________________.

Inspection records of these emergency-use respirators are found in the following location:
__________________________________________________________
APPENDIX 6 – Training Record

Department: ________________ Date: ________________

The individuals listed below have completed respiratory protection training as defined in OSHA 1910.134 and have covered, at a minimum, the following topics:
- The reasons for needing a respirator, and how improper fit, usage, or maintenance can compromise the protective effect of the unit.
- An explanation of the operation, capabilities, and limitations of the respirator.
- How to use the respirator effectively in emergency situations in which the respirator malfunctions.
- How to properly inspect, put-on and remove, use, and check the seals of the respirator.
- Procedures for maintenance and storage of the respirator.
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
- The responsibilities of the university and the individual regarding respiratory protection.
- Instruction on inspecting, donning, checking the fit of, and wearing the respirator.

Trainer Name: ______________________ Trainer Signature: ______________________

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APPENDIX 7 – Fit-Test Record

Name _______________________________ Date ______________ ID # _______________

Medical exam completed?  □ Yes  □ No  Date Scheduled ___________  Dept: ___________

The employee listed above has been fit-tested on the following respirator(s). This fit testing is good only for the brand, model and size respirator listed. Respirators shall not be worn when conditions prevent a seal of the respirator to the wearer. If there are any factors which change after the fit-testing such as growth of facial hair which might affect the seal of the respirator, the use of spectacles or protective devices which interfere with the seal, or obvious changes in facial features (scars, missing dentures or weight gain), the fit-testing will be void.

Brand and model of respirator: ___________________________________________________

Type of respirator:  □ Dust mask  □ Half-mask  □ Full face
□ Powered air purifying respirator  □ Self-contained breathing apparatus

Size of respirator:  □ Small  □ Small/Medium  □ Medium  □ Medium/Large
□ Large  □ Large/Xlarge  □ XLarge  □ Other: ___________

Cartridges expected to be used:  □ HEPA  □ Organic Vapor (OV)  □ Acid Gas(AG)
□ OV/AG  □ OV/HEPA  □ AG/HEPA
□ OV/AG/HEPA  □ N/A  □ Other - ___________

Contaminants expected to encounter:

_____________________________________________________________________________

_____________________________________________________________________________

Fit-test protocol:  □ Irritant Smoke  □ Saccharin  □ Isoamyl acetate  □ Bitrex™ Solution

Fit-test: (circle one)  PASS  /  FAIL

List of units and sizes that failed the fit-test: __________________________________________

_____________________________________________________________________________

Comments: _______________________________________________________________________

Fit-tester signature ___________________________ Date ___________________________

Employee signature _________________________ Date ___________________________
APPENDIX 8 – Voluntary Respirator Use

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 business unit provides respirators for your voluntary use, 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 respirator's 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 the wrong respirator.

I have received and read this form and understand my responsibilities.

__________________________________    ___________    ________________________
User’s Name                      UIN                        Date

__________________________
User’s Signature