

RESPIRATORY PROTECTION PROGRAM

for

SOUTHERN ILLINOIS UNIVERSITY CARBONDALE

Mandated by

OSHA

29 CFR 1910.134

The

Respiratory Protection Standard

Developed by

Center for Environmental Health & Safety

2000

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**Instructions for compliance
with the
Respiratory Protection Standard (29 CFR 1910.134)
requirements for a
Respiratory Protection Program**

This Model Respiratory Protection Program was developed by the Center for Environmental Health and Safety (CEHS) for use by Southern Illinois University Carbondale departments. Any department requiring the use of regulated respiratory protection equipment is required to maintain a Respiratory Protection Program. This model program can be adapted for use by these departments as a means of complying with Federal and State Department of Labor regulations. A first step in adopting this program is to enter the department name in the underlined blank space of the cover page and in the first paragraph of page 4 of the model document.

Each department that adopts this program must designate an individual in that department as the Departmental Program Administrator of the Respiratory Protection Program. The Administrator's name must be entered in the underlined blank space designated for this position (located at the end of the section on Program Administrator's responsibilities, page 6). This person will have the overall responsibility for compliance with the requirements of this program and should become familiar with the program and the governing regulations (29 CFR 1910.134). The knowledge and skills required for these duties will vary with the complexity of the workplace hazards of the department.

How do I, or a designated employee, become a qualified Program Administrator?

If your workers are exposed only to nuisance dusts and relatively low-toxicity materials, and they use only a few types of negative pressure respirators, knowledge of this guide and materials supplied by the manufacturer will be sufficient for you to serve as the Program Administrator.

If more dangerous chemicals are present, if the potential for high exposures exists, or if sophisticated respirators are used, (e.g., powered air purifying or self contained breathing apparatus) the Program Administrator must have more extensive experience and/or training. In these circumstances, contact Center for Environmental Health and Safety (CEHS) to obtain appropriate training.

Is there a list of approved training courses I can send my Program Administrator to?

No. The Occupational Safety and Health Administration (OSHA) does not provide a training course specifically to train Respiratory Protection Program Administrators, nor does OSHA require Program Administrators to attend a specified course. OSHA only requires the program administrator to have an adequate level of training or experience to deal with the complexity of the Respiratory Protection Program at the worksite.

How will OSHA determine that a person is experienced and/or trained to be a Respiratory Protection Program Administrator?

Usually, the OSHA compliance officer will review the written program and interview the Respiratory Protection Program Administrator. Questions asked during the interview are likely to focus on determining how familiar the Program Administrator is with the OSHA Respiratory Protection standard and the use and application of the respirators at the particular workplace. Significant deficiencies in the written program also could indicate a lack of training and understanding of the standard.

Steps to Adopt this Program:

1. Insert Department name in designated underlined space of this document's cover page.
2. Insert Department name in designated underlined space on page 4.
3. Insert Program Administrator name in designated underlined space on page 6.
4. Complete the list of evaluated respiratory hazardous work environments (Hazard Assessment) on page 7 of this program.

Southern Illinois University Carbondale

Respiratory Protection Program

Purpose

Southern Illinois University Carbondale (SIUC) employees may be exposed to respiratory hazards during certain job assignments. These hazards include particulate matter and chemical vapors. The purpose of the Department of _____
_____ Respiratory Protection program is to ensure that all SIUC employees are protected from exposure to these respiratory hazards and assure compliance with State and Federal law.

Engineering controls, such as ventilation and substitution of less toxic materials, are the first line of defense at SIUC; however, engineering controls may not always be feasible for some operations, or may not completely control the identified hazards. In these situations, respirators and other protective equipment must be used. Respirators are also needed to protect employees' health during emergencies.

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

Governing Regulations and Resources

The Respiratory Protection Program has been established to protect the health of workers who wear respirators and assure compliance with State and Federal Law. General respiratory protection requirements are found in the Code of Federal Regulations at 29 CFR 1910.134 (see Appendix E of this program); additional requirements and information are found in industry and substance specific worker protection standards. These standards include:

- Hazardous Waste Operations and Emergency Response (HAZWOPER) 29 CFR 1910.120
- Asbestos 29 CFR 1910.1001, 29 CFR 1926.1101
- Confined Space Entry 29 CFR 1910.146
- Laboratory Standard 29 CFR 1910.1450
- Hazard Communication Standard 29 CFR 1910.1200

- Environmental Protection Agency Worker Protection Standard 40 CFR 170
- National Institute for Occupational Health and Safety (NIOSH) 42 CFR 84

Scope and Application

This program applies to all employees who are required to wear respirators during normal work operations, and during some non-routine or emergency operations such as a spill of a hazardous substance. All employees working in these areas and engaged in certain processes or tasks must be enrolled in the respiratory protection program.

In addition, any employee who voluntarily wears a respirator when a respirator is not required is subject to the medical evaluation, cleaning, maintenance, and storage elements of this program, and must be provided with certain information specified in this section of the program. Employees who voluntarily wear filtering facepieces (disposable dust masks) are not subject to the medical evaluation, cleaning, storage, and maintenance provisions of this program.

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

Responsibilities:

Center for Environmental Health and Safety (CEHS)

CEHS (453-7180) will provide a Program Technical Advisor and a Compliance Evaluator to assist participating departments in:

- Developing and implementing the Respiratory Protection Program
- Employee training
- Respirator selection and fit testing
- Monitoring and evaluating potentially hazardous sites
- Providing guidance with regulatory compliance
- Auditing program compliance

Departmental Program Administrator

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

- Identifying work areas, processes or tasks that require workers to wear respirators, and evaluating hazards,
- Selection of respiratory protection options,
- Monitoring respirator use to ensure that respirators are used in accordance with their certifications,

- Arranging for and/or conducting training,
- Ensuring proper storage and maintenance of respiratory protection equipment,
- Conducting and/or arranging for qualitative fit testing,
- Administering the medical surveillance program,
- Maintaining records required by the program,
- Evaluating the program,
- Updating written program, as needed,
- Requesting CEHS technical assistance when needed.

The Program Administrator for this department is _____.

Supervisors

In addition to being knowledgeable about the program requirements for their own protection, supervisors must also ensure that the program is understood and followed by the employees under their charge. Duties of the supervisor include:

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

Employees

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

- Care for and maintain their respirators as instructed, and store them in a clean sanitary location,
- Inform their supervisor if the respirator no longer fits well, and request a new one that fits properly,
- Inform their supervisor or the Program Administrator of any respiratory hazards that they feel are not adequately addressed in the workplace and of any other concerns that they have regarding the program or safety and health.

Program Elements:

Selection Procedures

The Departmental Program Administrator, in consultation with CEHS Program Technical Advisors, will select respirators to be used on site, based on the hazards to which workers are exposed and in accordance with all Occupational Safety and Health Administration (OSHA) standards. 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. The results of this evaluation will be contained in a listing within this program. CEHS is available to assist in these evaluations. The hazard evaluation will include:

- 1) Identification of areas where respirators are required can be aided by consulting a list of hazardous substances used in the workplace, by department, or work process. This list is a part of the Hazard Communication Program or the Chemical Hygiene Plan of each department utilizing chemicals in the workplace.
- 2) Review of work processes to determine where potential exposures to these hazardous substances may occur. This review shall be conducted by surveying the workplace, reviewing process records, and interviewing employees and supervisors.
- 3) Exposure monitoring to quantify potential hazardous exposures.

Hazardous communication surveys conducted in the Department of _____ have shown that contaminant exposures exceed the OSHA permissible exposure Limit (PEL), short-term exposure limit (STEL), or ceiling limits in the following areas. Adequate protection from these hazards can be obtained through the use of National Institute for Occupational Safety and Health (NIOSH) approved respirators as indicated.

Contaminant	Exposure Limit	Worker Job Classification	Respirator
1.			
2.			
3.			
4.			
5.			
6.			

Updating the Hazard Assessment

The Program Administrator must revise and update the hazard assessment as needed (i.e., any time work process or chemicals used changes, which may potentially affect exposure). If an employee feels that respiratory protection is needed during a particular activity, he/she is to contact his or her supervisor or the Departmental Program Administrator. The potential hazard will be evaluated and the results of that assessment will be communicated to the employees. If it is determined that respiratory protection is necessary, all other elements of this program will be in effect for those tasks and this program will be updated accordingly.

NIOSH Certification

All respirators must be certified by the National Institute for Occupational Safety and Health (NIOSH) and shall be used in accordance with the terms of that certification. All filters, cartridges, and canisters must be labeled with the appropriate NIOSH approval label. The label must not be removed or defaced while it is in use.

Respirators for IDLH atmospheres

(See OSHA Standard, Appendix E, for a definition of IDLH and other terms)

CEHS should be consulted any time that a suspected “Immediately Dangerous to Life and Health” (IDLH) situation occurs. The following respirators should be used in atmospheres that may be considered IDLH:

- A full face piece pressure demand Self Contained Breathing Apparatus (SCBA) certified by NIOSH for a minimum service life of thirty minutes, or
- A combination full-face piece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.

Respirators for atmospheres that are not IDLH

The respirators selected shall be adequate to protect the health of the employee and ensure compliance with all other OSHA statutory and regulatory requirements, under routine and reasonably foreseeable emergency situations. The respirator selected shall be appropriate for the biological and chemical state and physical form of the contaminant.

Voluntary Respirator Use

The department may provide respirators to employees for voluntary use or allow employees to furnish their own respirators. The Program Administrator will provide all employees who voluntarily choose to wear respirators with a copy of Appendix D of the standard. (Appendix D details the requirements for voluntary use of respirators by employees). Employees choosing to wear a respirator must comply with the procedures for Medical Evaluation, Respirator Use, and Cleaning, Maintenance and Storage.

The Departmental 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 the medical evaluations.

Medical Evaluation

Employees who are either required to wear respirators, or who choose to wear an air purifying respirator (APR), SAR or an SCBA voluntarily, must pass a medical exam before being permitted to wear a respirator on the job. Employees are not permitted to wear respirators until a physician has determined that they are medically able to do so.

Medical evaluations for asbestos workers are subject to the requirements of 29 CFR 1926.1101 or 29 CFR 1910.1001. Medical evaluation forms for those workers are an appendix to that regulation.

A designated physician will provide the medical evaluations. Medical evaluation procedures are as follows:

- The medical evaluation will be conducted using the questionnaire provided in Appendix B of this Respiratory Protection Program. The Program Administrator will provide a copy of this questionnaire to all employees requiring medical evaluations.
- Employees will be permitted to fill out the questionnaire on University time. To the extent feasible, SIUC will assist employees who are unable to read the questionnaire (by providing help in reading the questionnaire). When this is not possible, the employee will be sent directly to the physician for medical evaluation.
- The completed questionnaire will remain confidential and be forwarded to the designated physician for evaluation.
- Follow-up medical exams will be granted to employees as required by the standard, and/or as deemed necessary by the physician.
- All employees will be granted the opportunity to speak with the physician about their medical evaluation, if they so request.
- The Program Administrator has provided the physician with a copy of this program, a copy of the Respiratory Protection standard, the list of hazardous substances by work area, and for each employee requiring evaluation: his or her work area or job title, proposed respirator type and weight, length of time required to wear a respirator, expected physical work load (light, moderate, or heavy), potential temperature and humidity extremes, and any additional protective clothing required. Appendix D of this document is a sample form that can be used to supply the physician with this information.

- Any employee required for medical reasons or OSHA standard requirements to wear a positive pressure air purifying respirator will be provided with a powered air purifying respirator (PAPR).
- The physician will send to the Program Administrator a report of his or her recommendation of the employee's ability to wear a respirator (Appendix C of this document can be used for this purpose).

The physician's report shall contain only the following information:

1. Any limitations on respirator use related to the medical condition of the employee, or related to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator.
2. The need, if any, for follow-up medical evaluations.
3. A statement that the physician has provided the employee with a copy of the physician's recommendation.

After an employee has received clearance and begun to wear his or her respirator, additional medical evaluations will be provided under the following circumstances:

- Employee reports signs and/or symptoms related to their ability to use a respirator, such as shortness of breath, dizziness, chest pains, or wheezing,
- The physician or supervisor informs the Program Administrator that the employee needs to be reevaluated,
- Information from this program, including observations made during fit testing and program evaluation, indicates a need for reevaluation,
- A change occurs in workplace conditions that may result in an increased physiological burden on the employee.

All examinations and questionnaires are to remain confidential between the employee and the physician.

Fit Testing

Fit testing is required for employees working in areas that require the use of respirators for their respiratory protection.

Employees voluntarily wearing respirators may also be fit tested upon request.

Employees who are required to wear respirators will be fit tested:

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

Employees will be fit tested with the make, model, and size of respirator that they will actually wear. Fit testing of PAPRs is to be conducted in the negative pressure mode. CEHS will conduct fit tests following the OSHA approved Saccharin Solution Aerosol QLFT Protocol in Appendix B (B3) of the Respiratory Protection standard.

Respirator Use

General Use Procedures:

- Employees will use their respirators under conditions specified by this program, and in accordance with the training they receive on the use of each particular model. In addition, the respirator shall not be used in a manner for which it is not certified by NIOSH or by its manufacturer.
- All employees shall conduct user seal checks each time that they wear their respirator. Employees shall use either the positive or negative pressure check (depending on which test works best for them) specified in Appendix B-1 of the Respiratory Protection Standard.
- All employees shall be permitted to leave the work area to maintain their respirator for the following reasons: to clean their respirator if the respirator is impeding their ability to work, change filters or cartridges, replace parts, or to inspect the respirator if it stops functioning as intended. Employees should notify their supervisor before leaving the area.
- Employees are not permitted to wear tight-fitting respirators if they have any condition, such as facial scars, facial hair, or missing dentures, that prevents them from achieving a good seal. Employees are not permitted to wear headphones, jewelry, or other articles that may interfere with the facepiece-to-face seal.

Respirator Malfunction

1. APR Respirator Malfunction:

For any malfunction of an APR (e.g., such as contaminant breakthrough, facepiece leakage, or improperly working valve), the respirator wearer should inform his or her

supervisor that the respirator no longer functions as intended, and go to a designated safe area to maintain, repair or replace the respirator. The supervisor must ensure that the employee receives the needed parts to repair the respirator, or is provided with a new respirator.

2. Atmosphere-supplying Respirator Malfunction, either (SAR) or (SCBA):

All workers wearing atmosphere-supplying respirators will work with a buddy. Buddies shall assist workers who experience a malfunction as follows:

If one of the workers experiences a respirator malfunction, he/she shall signal this to their buddy. The buddy must immediately stop what he or she is doing to escort the employee to a safe area where the employee can safely remove the Respirator. Individuals must not work alone wearing an SAR or SCBA.

IDLH Procedures

If a work area has been designated as immediately dangerous to life and health (IDLH), workers will follow the permit required confined space entry procedures specified in the confined space work procedures of 29 CFR 1910.146, or Hazardous Waste Operations and Emergency Response (HAZWOPER) 29 CFR 1910.120. As specified in these procedures, the Program Administrator has determined that workers entering these areas shall wear a pressure demand SAR or SCBA. In addition, an appropriately trained and equipped standby person shall remain outside the hazardous area and maintain constant visual, voice, or signal line communication with the worker inside. In the event of an emergency requiring the standby person to enter the IDLH environment, the employer or designee must be notified before the standby person shall proceed with rescue operations in accordance with rescue procedures outlined in the regulations.

Air Quality

For supplied-air respirators, only Grade D breathing air shall be used in the cylinders.

Cleaning, Maintenance, Change Schedules and Storage

Cleaning

Respirators are to be regularly cleaned and disinfected. Respirators issued for the exclusive use of a single employee is the preferred procedure and is recommended by CEHS. Respirators shall be cleaned as often as necessary, but at least once a day if used continuously. Atmosphere supplying and emergency use respirators are to be cleaned, inspected and disinfected after each use.

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

- Disassemble respirator, removing any filters, canisters, or cartridges,
- Wash the facepiece and associated parts in a mild detergent with warm water. Do not use organic solvents,
- Rinse completely in clean warm water,
- Wipe the respirator with disinfectant wipes (70% Isopropyl Alcohol) to kill germs,
- Air dry in a clean area,
- Reassemble the respirator and replace any defective parts,
- Place in a clean, dry plastic bag or other air tight container.

Note: The department supervisors will ensure an adequate supply of appropriate cleaning and disinfection material. If supplies are low, employees should contact their supervisor.

Maintenance

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

The following checklist will be used when inspecting respirators:

- Facepiece:
 - cracks, tears, or holes
 - facemask distortion
 - cracked or loose lenses/faceshield
- Headstraps:
 - breaks or tears
 - broken buckles
- Valves:
 - residue or dirt
 - cracks or tears in valve material
- Filters/Cartridges:
 - approval designation
 - gaskets
 - cracks or dents in housing
 - proper cartridge for hazard
- Air Supply Systems:
 - breathing air quality/grade
 - condition of supply hoses

hose connections
settings on regulators and valves

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

Identification of Filters and Cartridges

All filters and cartridges shall be labeled and color coded with the NIOSH approval label and the label shall not be removed or made indistinguishable.

Respirator Filter and Canister Replacement

An important part of the Respiratory Protection Program includes identifying the useful life of canisters and filters used on APRs. Each filter and canister shall be equipped with an end-of service-life indicator (ESLI) certified by NIOSH for the contaminant; or

If there is no ESLI appropriate for conditions, a change schedule will be followed for canisters and cartridges that is based on objective information or data that will ensure canisters and cartridges are changed before the end of their service life.

Cartridges and filters shall be changed:

- Prior to expiration date,
- When requested by employee,
- When contaminate odor is detected,
- When restriction to air flow has occurred as evidenced by increased effort by user to breathe normally,
- When discoloring of the filter media is evident.

Storage

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

Defective Respirators

Respirators that are defective or have defective parts shall be taken out of service immediately. If, during an inspection, an employee discovers a defect in a respirator, he/she is to bring the defect to the attention of his or her supervisor.

Training

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

The training course will cover the following topics:

- the Respiratory Protection Program,
- the OSHA Respiratory Protection standard,
- the availability of assistance from CEHS,
- respiratory hazards encountered at SIUC and their health effects,
- proper selection and use of respirators,
- limitations of respirators,
- respirator donning, user seal (fit) checks and doffing,
- fit testing procedures,
- emergency use procedures,
- maintenance and storage,
- medical signs and symptoms limiting the effective use of respirators.

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

Program Evaluation

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

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

Administrator. These findings will be reported to the Director of Center for Environmental Health and Safety and to relevant Deans, Department Chairs or Directors. The report will list plans to correct deficiencies in the respirator program and provisions for re-inspections after corrective actions have been taken.

Documentation and Recordkeeping

A written copy of this program and the OSHA standard is kept in the Departmental Program Administrator's office and is available to all employees who wish to review it. A copy of the Model Respiratory Protection program is available at the Center for Environmental Health and Safety and on the web site for CEHS at <http://www.cehs.siu.edu>.

Also maintained in the Departmental Program Administrator's office are copies of training and fit test records. These records will be updated as new employees are trained, as existing employees receive refresher training, and as new fit tests are conducted.

The Departmental Program Administrator will also retain copies of the medical records for all employees covered under the respiratory program. The completed medical questionnaire and the physician's documented findings are confidential and will remain at the medical clinic. The company will only retain the physician's written recommendation regarding each employee's ability to wear a respirator. These records will be retained and available in accordance with 29 CFR 1910.1020. The medical record for each employee shall be preserved and maintained for at least the duration of employment plus (30) years.

Appendix A

Guidelines for Medical Evaluators

The Occupational Safety and Health Administration (OSHA) of the Federal Government requires specific actions by employers who have employees who use respirators in the performance of their job duties. Medical evaluations and examinations of these employees are part of the requirements of OSHA.

This guideline is designed to aid medical personnel who administer evaluations and examinations to employees.

The following portion of the OSHA Respiratory Protection Standard, 29 CFR 1910.134 applies to medical evaluation, examination and recommendations.

1910.134(e) Medical evaluation. Using a respirator may place a physiological burden on employees that varies with the type of respirator worn, the job and workplace conditions in which the respirator is used, and the medical status of the employee. Accordingly, this paragraph specifies the minimum requirements for medical evaluation that employers must implement to determine the employee's ability to use a respirator.

- (1) General. The employer shall provide a medical evaluation to determine the employee's ability to use a respirator, before the employee is fit tested or required to use the respirator in the workplace.
- (2) Medical evaluation procedures.
 - (i) The employer shall identify a physician or other licensed health care professional (PLHCP) to perform medical evaluations using a medical questionnaire or an initial medical examination that obtains the same information as the medical questionnaire.
 - (ii) The medical evaluation shall obtain the information requested by the questionnaire in Sections 1 and 2, Part A....
- (3) Follow-up medical examination.
 - (i) The employer shall ensure that a follow-up medical examination is provided for an employee who gives a positive response to any question among questions 1 through 8 in Section 2, Part A....
 - (ii) The follow-up medical examination shall include any medical tests, consultations, or diagnostic procedures that the PLHCP deems necessary to make a final determination.
- (4) Administration of the medical questionnaire and examinations.
 - (i) The medical questionnaire and examinations shall be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee. The medical questionnaire shall be administered in a manner that ensures that the employee understands its content.
 - (ii) The employer shall provide the employee with an opportunity to discuss the questionnaire and examination results with the PLHCP.
- (5) Supplemental information for the PLHCP.
 - (i) The following information must be provided to the PLHCP before the PLHCP makes a recommendation concerning an employee's ability to use a respirator:
 - (A) The type and weight of the respirator to be used by the employee;
 - (B) The duration and frequency of respirator use (including use for rescue and escape);
 - (C) The expected physical work effort;
 - (D) Additional protective clothing and equipment to be worn;
 - (E) Temperature and humidity extremes that may be encountered.
 - (ii) Any supplemental information provided previously to the PLHCP regarding an employee need not be provided for a subsequent medical evaluation if the information and the PLHCP remain the same.

- (6) Medical determination. In determining the employee's ability to use the respirator, the employer shall:
- (i) Obtain a written recommendation regarding the employee's ability to use the respirator from the PLHCP. The recommendation shall provide only the following information:
 - (A) Any limitations on respirator use related to the medical condition of the employee, or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator;
 - (B) The need, if any for follow-up medical evaluations; and
 - (C) A statement that the PLHCP has provided the employee with a copy of the PLHCP's written recommendation.
 - (ii) If the respirator is a negative pressure respirator and the PLHCP finds a medical condition that may place the employee's health at increased risk if the respirator is used, the employer shall provide a Powered Air Purifying Respirator (PAPR) if the PLHCP's medical evaluation finds that the employee can use such a respirator;

The Medical Evaluation form is provided in Appendix B (p. 19-24) of the Respiratory Protection Program. The information provided by the employee in this form is confidential and for use only by the PLHCP in making a determination of ability to use a respirator.

The PLHCP written recommendation will provide only the information requested in the Respiratory Protection Standard. A sample form that can be used by the PLHCP for this purpose is provided in Appendix C (p. 25) of the Respiratory Protection Program.

The employer will provide the PLHCP with supplemental information. A sample form for this purpose is provided in Appendix D (p. 26) of the Respiratory Protection program. This form is not required to be used, but it is mandatory that the supplemental information be provided.

Any questions concerning the medical evaluations, examinations, recommendations or other requirements of the regulations can be directed to the Center for Environmental Health and Safety at Southern Illinois University Carbondale.

APPENDIX B

OSHA Respirator Medical Evaluation Questionnaire

Can you read (circle one): Yes / No

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

Part A. Section 1. The following information must be provided by every employee who has been selected to use any type of respirator.

Answer every question. (Please print)

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

Part A. Section 2. Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator (please circle "yes" or "no").

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

2. Have you ever had any of the following conditions?
 - a. Seizures (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 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: **Yes / No**
 - b. Heart trouble: **Yes / No**
 - c. Blood pressure: **Yes / No**
 - d. Seizures (fits): **Yes / No**

8. If you've used a respirator, have you ever had any of the following problems? (If you've never used a respirator, check the following space and go to question 9:)_____
 - a. Eye irritation: **Yes / No**
 - b. Skin allergies or rashes: **Yes / No**
 - c. Anxiety: **Yes / No**
 - d. General weakness or fatigue: **Yes / No**
 - e. Any other problem that interferes with your use of a respirator: **Yes / No**

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

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

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

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

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

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

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

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

Part B.

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

1. In your present job, are you working at high altitudes (over 5,000 feet) or in a place that has lower than normal amounts of oxygen: **Yes / No**
If "yes," do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you're working under these conditions: **Yes / No**
2. At work or at home, have you ever been exposed to hazardous solvents, hazardous airborne chemicals (e.g., gases, fumes, or dust), or have you come into skin contact with hazardous chemicals: **Yes / No**
If "yes," name the chemicals if you know them: _____
3. Have you ever worked with any of the materials, or under any of the conditions, listed below:
 - a. Asbestos: **Yes / No**
 - b. Silica (e.g., in sandblasting): **Yes / No**
 - c. Tungsten/cobalt (e.g., grinding or welding this material): **Yes / No**
 - d. Beryllium: **Yes / No**
 - e. Aluminum: **Yes / No**
 - f. Coal (for example, mining): **Yes / No**
 - g. Iron: **Yes / No**
 - h. Tin: **Yes / No**
 - i. Dusty environments: **Yes / No**
 - j. Any other hazardous exposures: **Yes / No**
 - k. If "yes," describe these exposures: _____

4. List any second jobs or side businesses you have: _____
5. List your previous occupations: _____

6. 6. List your current and previous hobbies: _____

7. 7. Have you been in the military services? **Yes / No**
If "yes," were you exposed to biological or chemical agents (either in training or combat): **Yes / No**
8. Have you ever worked on a HAZMAT team? **Yes / No**
9. Other than medications for breathing and lung problems, heart trouble, blood pressure, and seizures mentioned earlier in this questionnaire, are you taking any other medications for any reason (including over-the-counter medications): **Yes / No**
If "yes," name the medications if you know them: _____
10. Will you be using any of the following items with your respirator(s)?
 - a. HEPA Filters: **Yes / No**
 - b. Canisters (for example, gas masks): **Yes / No**
 - c. Cartridges: **Yes / No**

11. How often are you expected to use the respirator(s) (circle "yes" or "no" for all answers that apply to you)?:
- a. Escape only (no rescue): **Yes / No**
 - b. Emergency rescue only: **Yes / No**
 - c. Less than 5 hours per week: **Yes / No**
 - d. Less than 2 hours per day: **Yes / No**
 - e. 2 to 4 hours per day: **Yes / No**
 - f. Over 4 hours per day: **Yes / No**

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

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

If "yes," how long does this period last during the average shift: _____hrs. _____mins.

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

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

If "yes," how long does this period last during the average shift: _____hrs. _____mins.

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

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

If "yes," how long does this period last during the average shift: _____hrs. _____mins.

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

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

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

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

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

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

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

18. Provide the following information, if you know it, for each toxic substance that you'll be exposed to when you're using your respirator(s): Name of the first toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of the second toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of the third toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

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

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

Appendix C

Physician's Recommendation Report

This report contains the physician or other licensed health care professional's (PLHCP) written recommendation concerning the ability of the patient/employee to use a respirator as described in the Respiratory Protection Program for Southern Illinois University Carbondale.

Employee's Name: _____

Employee's Department: _____

Date of Evaluation: _____

Date of Examination (if applicable): _____

Based on the evaluation of the medical evaluation questionnaire: _____

- (a) Employee is able to wear a respirator without restrictions: _____
- (b) Employee answered yes to one or more questions in Section 2, Part A, questions 1 through 8 of the questionnaire and therefore must undergo medical examination, medical tests, consultations, and/or diagnostic procedures deemed necessary by the evaluating physician before further evaluation of employee's ability to wear a respirator can be made: _____

Based on the evaluation of the medical examination of employee: _____

- (a) Employee is able to wear a respirator without restrictions: _____
- (b) Employee is able to wear a respirator under the following conditions: _____

(c) Employee is unable to wear a respirator at this time: _____
(re-evaluation should be conducted after): _____

(d) The employee has been informed by the PLHCP of the increased risk of lung cancer attributed to the combined effects of smoking and working with asbestos: _____

Signature of evaluating physician or PLHCP: _____

Date: _____

This report should be sent to the Departmental Program Administrator at the address listed on the Supplemental Information form for this employee. Billing should also be sent to that same department. The employee should also be given a copy of this report.

Appendix D

Supplemental Information

This information will be provided to the attending physician or PLHCP before an evaluation and recommendation report is made concerning the employee's ability to wear a respirator.

Date: _____

Name of Employee using respirator _____

Employee's work department: _____

Departmental Program Administrator: _____

(This is the person who will receive the Physician or PLHCP Recommendation Report)

Address of Dept. Program Administrator: _____

- 14. How often and for how long do you expect the employee to use the respirator(s)
 - g. Escape only (no rescue): _____
 - h. Emergency rescue only: _____
 - i. Less than 5 hours per week: _____
 - j. Less than 2 hours per day: _____
 - k. 2 to 4 hours per day: _____
 - l. Over 4 hours per day: _____

15. During the period of respirator use, is the 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.

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

If "yes," how long does this period last during the average shift: _____hrs. _____mins.

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

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

If "yes," how long does this period last during the average shift: _____hrs. _____mins.

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

16. Will employee be wearing protective clothing and/or equipment (other than the respirator) when using the respirator: **Yes / No**

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

4. Will employee be working under hot conditions (temperature exceeding 77 deg.F): **Yes / No**
5. Will employee be working under humid conditions: **Yes / No** (if yes, describe: _____)
6. Describe the type of respirator that the employee will be using: _____

7. Weight of the respirator: _____

APPENDIX E

Respiratory Protection Standard (29 CFR 1910.134)

http://www.osha-slc.gov/OshStd_data/1910_0134.html