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Respiratory Protection Program

California Code of Regulations,
Title 8
General Industry Safety Orders
Section 5144 and 5199

California State University,

Long Beach

Revised
April 6, 2010

Office of
Environmental Health and Safety

Respiratory Protection Program

California State University Long Beach

Respiratory Protection Program

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I University Responsibilities

The CSULB Respiratory Protection Program seeks to ensure that administrative and engineering controls are implemented to minimize the use of respiratory protective equipment and exposure to airborne contaminants. When those options are not effective in reducing employee exposure or in the case of emergencies, respiratory protection will be used by employees. The use of that protection is proscribed and directed by this plan. Additionally, the requirements of Cal/OSHA's Aerosol Transmissible Disease standard (CCR, T8, 5199) are articulated in this plan as well as the compliance strategies the university will use to implement the new standard.

All university employees required to wear respirators as a result of an assessment by Environmental Health and Safety (emergency response personnel, health care workers, University Police, selected university employees) are governed by this plan.

- Environmental Health and Safety (E. H. & S.) will:

  Designate a qualified program administrator to conduct the program and required evaluations of program effectiveness.

  Develop, implement and monitor the Respiratory Protection Plan in compliance with California Code of Regulations Title 8, Section 5144, and section 5199.

  Assist departments in complying with program requirements on a consulting basis.

  Review, approve and purchase all department purchases of respiratory protective equipment.

  Provide training for employees who must use a respirator on the need for respiratory protection, criteria for selecting respirators, and respirator fitting, use and maintenance.

  Develop and implement a campus wide medical monitoring program for respirator users.

  Ensure managers and supervisors whose employees must use a respirator conduct and document routine inspections for respiratory equipment usage, maintenance, and storage.

  Maintain records indicating the brand and type of respirator used by each employee, the date the employee was fit tested, and the date the employee received respirator training.

  Conduct monthly inspections of all Self Contained Breathing Apparatus units.

  Conduct periodic training sessions concerning respirator usage, care, maintenance, repair, medical surveillance, etc....

  Evaluate the effectiveness of the program.

Department Responsiblities

Environmental Health and Safety will assist departments in selecting the applications and usage of respiratory protection as well as the engineering and administrative control options.

- Each Department will:

  Determine what specific applications may require the use of respiratory equipment.

  Contact E.H. & S. for assistance in exploring options that may be used to eliminate the need for a respirator.

  If a respirator is deemed necessary, follow E.H.&S. recommendations and provide proper respiratory equipment to meet the needs of each specific application.

  Ensure that employees are provided with adequate training and instructions on the specific respirator they must use, the conditions of use for that respirator and the all personnel are completely knowledgeable of the respiratory requirements for the areas in which they work.

  Ensure that the personnel comply with the University Respiratory Protection Program, including respirator inspection and maintenance.

  Periodically evaluate respirator users for proper seal check procedure and usage.

Employee Responsibilities

The employee is required to use good judgment and minimize exposures to airborne contaminants.

- Each Employee will:

  Use common sense and good judgment at all times.

  Read and comply with all applicable procedures, whether written or oral, while performing assigned duties. Although no single set of safety procedures can guarantee an accident-free employment or work area, the most common minimum safety standards are listed in this manual.

  Utilize respiratory protective equipment in accordance with instruction and training provided by the Environmental Health and Safety office and/or the employee's individual department.

  Inform the supervisor of any personal health problems that could be aggravated by the use of respiratory protective equipment. Persons with upper respiratory symptoms (colds) may not use a respirator until they are asymptomatic.

  Guard against damage and ensure that respirators are not disassembled, modified, or otherwise altered in any way other than by the changing of the respirator cartridges/ filters.

  Report any observed or suspected malfunctions of the respirator equipment to the supervisor.

  Use only types of respiratory protection equipment that have been approved and training has been provided for.

  Conduct positive and negative pressure fit tests prior to each respirator use.

  Ensure that the issued respirator is inspected, cleaned, disinfected, repaired, and stored in accordance with procedures obtained in training.

  If an employee wishes to provide their own respirator, the conditions of use for that respirator remain as detailed in the CSULB Respiratory Protection Program and Cal/OSHA regulatory requirements.

II Medical Monitoring

A complete medical monitoring system is in place for all employees that require the use of respiratory protection.

- The medical monitoring program:

  Identifies the employees that may require periodic medical monitoring because of their routine assignments.

  Employees should not be assigned to tasks requiring the use of respirators unless it has been determined that they are physically able to perform the work while using the respiratory equipment. These assessments and /or examinations will be conducted by the PLHCP charged with this duty.

  Complies with federal and state programs designed to use administrative and engineering controls to minimize exposures.

  Failure or refusal to comply with or to submit to a confidential medical evaluation process as directed by the University shall constitute a failure or refusal to perform a normal and reasonable duty of a position.

  CSULB shall provide a confidential 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. CSULB may discontinue an employee's medical evaluations when the employee is no longer required to use a respirator.

  The cost of the program and medical evaluation is assumed by the University.

- Medical Questionnaire:

  The first step in medical evaluation of the ability for an employee to use a respirator is the Medical Questionnaire.

- Administration of the medical questionnaire and examinations.

  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.

  A copy of the questionnaire shall be provided by CSULB to the employee, to be completed and sent directly to the PLHCP (Address and cover letter provided).

- Medical evaluation procedures.

CSULB 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.

CSULB shall provide the employee with an opportunity to discuss the questionnaire and examination results with the PLHCP.

The medical evaluation shall obtain the information requested by the questionnaire in accordance with the provisions of CCR Title 8 Section 5144 appendices C. (Attached and highlighted)

CSULB will ensure that a follow-up medical examination is provided for an employee who gives a affirmative response to any question among questions 1 through 8 in Section 2, Part A of Appendix C (Highlighted gray section of the form) or whose initial medical examination demonstrates the need for a follow-up medical examination at no cost to the employee. This process will be initiated by the PLHCP after the questionnaire has been reviewed.

The follow-up medical examination shall include any medical tests, consultations, or diagnostic procedures that the PLHCP deems necessary to make a final determination.

Results of the questionnaire and any follow-up examinations will be confidential between the PLHCP and the employee.

- CSULB will provide the PLHCP with the following information before the PLHCP makes a recommendation concerning an employee's ability to use a respirator:

  1. The type and weight of the respirator to be used by the employee;

  2. The duration and frequency of respirator use (including use for rescue and escape);

  3. The expected physical work effort;

  4. Additional protective clothing and equipment to be worn; and

  5. Temperature and humidity extremes that may be encountered.

  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.

  The employer shall provide the PLHCP with a copy of the written respiratory protection program.

  (Note) When the employer replaces a PLHCP, the employer must ensure that the new PLHCP obtains this information, either by providing the documents directly to the PLHCP or having the documents transferred from the former PLHCP to the new PLHCP. However, OSHA does not expect employers to have employees medically reevaluated solely because a new PLHCP has been selected.

- **CSULB will receive the following medical determination provided directly from the PLHCP.**

  In determining the employee's ability to use a respirator, CSULB shall obtain a written recommendation regarding the employee's ability to use the respirator from the PLHCP. The recommendation shall provide only the following information:

  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;

  The need, if any, for follow-up medical evaluations; and

  A statement that the PLHCP has provided the employee with a copy of the PLHCP's written recommendation.

  (NOTE) 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 PAPR if the PLHCP's medical evaluation finds that the employee can use such a respirator; if a subsequent medical evaluation finds that the employee is medically able to use a negative pressure respirator, then the employer is no longer required to provide a PAPR.

  - Timelines

    The medical status will be reviewed bi-annually (or as current regulations require for asbestos workers).

  - Biological Monitoring:

    Biological monitoring in the form of blood, tissue ,urine analysis or other tests as prescribed will be conducted by the PLHCP medical authority.

For the full scope of medical monitoring protocols required to be conducted by the university for its employees who require monitoring, consult the CSULB Medical Monitoring Program.

III Education and training

The office of Environmental Health and Safety will train employees to identify hazards and work areas that may require the use of respiratory protection.

- Education and training will consist of:

  The office of Environmental Health and Safety conducting workplace specific respirator training. The training curriculum will contain:

  The use of respiratory protection, including normal use and use during foreseeable and unforeseen emergency situations.

  The limitations of respiratory protection.

  The care and maintenance of the respiratory protection equipment.

  Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator;

  What the limitations and capabilities of the respirator are;

  How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions

  How to inspect, put on and remove, use, and check the seals of the respirator

  What the procedures are for maintenance and storage of the respirator;

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

  The conditions under which employees may use respirators when none are required by CCR, Title 8, section 5144, and when they may use their own respiratory equipment.

  Initial and refresher training and medical evaluation for university employees who work with asbestos containing materials

IV Selection, Approval and Procurement

The Office of Environmental Health and Safety will assist all departments in determining the appropriate level, type and avenues to acquire the appropriate selections of respiratory protection for departments.

- Selection

  Proper selection of respirators shall be made by each department in consultation with the office of Environmental Health and Safety.

  Environmental Health and Safety shall select only respiratory protection equipment that is certified by NIOSH, and appropriate for use based on identification and evaluation of respiratory hazards in the workplace. That identification process shall be conducted by the office of Environmental Health and Safety, using recognition, evaluation and control methods adopted by the American Conference of Governmental Industrial Hygienists (ACGIH) and current accepted industrial hygiene practice.

- Approval

  Whenever respirators are required to be used to control harmful exposures, only respirators approved by Mine Safety and Health Administration (MSHA) or the National Institute for Occupational Safety and Health (NIOSH) shall be used.

  Only parts designated OEM by the respirator manufacturer for the specific respirator system shall be used for replacement

- Procurement

  Departments are responsible for ensuring that an adequate stock of respirators, filters and/or cartridges is maintained.

  When additional equipment is anticipated, the department shall complete a departmental requisition and forward it to the Purchasing Office. The Purchasing Office will contact the Director, Environmental Health and Safety regarding approval of the equipment purchase request.

- Employee Owned Respirator (Voluntary Use)

An employer may provide respirators at the request of employees or permit the employees to use their own respirators, if the employer determines that such respirator use will not in itself create a hazard. If the employer determines that any voluntary respirator use is permissible, the employer shall provide the respirator users with the information contained in Appendix D of CCR; T8 5144 of this highlighted section below ("Information for Employees Using Respirators When Not Required Under the Standard.").

Appendix D to Section 5144 (Mandatory) Information for Employees Using Respirators When Not Required Under the Standard.

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

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.

2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.

3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.

4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

V Employee fit testing

Fit tests are essential to insuring that a respirator forms a good seal against the user's face and prevents contaminants from leaking into the mask. Manufactures provide fitting instructions and use limitations on the product package. Respirator face pieces are made in various sizes to fit a wide variety of face shapes and sizes. Some workers simply will not be able to get a good seal with any available respirator and should not be assigned to duties requiring respiratory protection. This problem can be acute in a negative pressure respirator situation.

- Tight Fitting Respirators:

  Fit testing shall be conducted by Environmental Health and Safety prior to issuance of a respirator, and annually thereafter for all employees, including those employees who are required to wear respirators for asbestos and/or lead related work.

  The following procedures shall be used to conduct fit testing:

  Quantitative Fit Testing

  (Note: The university may at its discretion contract with a provider for this service.)

  The university shall employ quantitative fit testing as the primary tool for assessing proper fit for tight fitting respirators. The equipment used for this purpose will be a unit approved to provide quantitative evaluation of respirator fit by CCR, Title 8, Section 5144 Appendix A.

  The following list of exercises is analogous to the exercises listed in CCR Title 8 Section 5144, Appendix A, and will be successfully completed by all employees required to wear tight fitting respirators:

  1. Normal breathing
  2. Deep breathing
  3. Turning head side to side
  4. Moving head up and down
  5. Talking
  6. Grimace
  7. Normal Breathing

  An additional acceptable test protocol, approved by Cal/OSHA (REDON) may be substituted as follows:

  1. Face forward, normal breathing
  2. Bend at waist
  3. Shake head and face forward
  4. Remove mask, redon,
  5. Face forward, normal breathing

The minimum acceptable fit factors for employees using tight fitting respirators are 100 for a half mask tight fitting respirators, and 500 for full facepiece tight fitting respirators.

Qualitative Fit Testing (Bitrex or Sodium Saccharine)

If, during equipment failures, quantitative fit testing cannot be applied to employees requiring the use of tight fitting respirators, qualitative fit testing shall be employed, using Bitrex challenge agent as the primary agent, or sodium saccharine agent if the employee cannot detect Bitrex. If neither agent can be detected by the employee, or if the employee fails both challenge agent protocols, the employee shall be directed by E.H. & S. to the university contract medical provider for quantitative N95 fit testing. (NOTE: E.H.& S. shall use Bitrex challenge agent as the primary challenge agent for all employee qualitative fit testing.)

If the employee fails both qualitative protocols and the quantitative protocol for N95 filtering facepiece respirators, the employee **must not** be assigned to tasks that require a respirator under this program and/or CCR, Title 8, sec. 5144 ,5199, 5208 or any Cal/OSHA standard requiring the use of respiratory protection.

Bitrex Challenge Agent Qualitative Fit Test Procedure

Bitrex Challenge Agent Threshold Sensitivity Test

The employee shall don a fit test hood (3M FT-14 and 15 hood and collar).

The employee shall not have a respirator on for this test.

A Bitrex sensitivity solution shall be prepared according to manufacturers specifications, and placed in a nebulizer.

Using the nebulizer with the solution, the fit test administrator shall direct the outlet port into the hood. The fit test subject shall hold their mouth open slightly with the tongue extended. The nebulizer shall be squeezed 10 times. If the subject reports they taste the solution during any one of the squeeze attempts, the sensitivity shall be reported as 10. If they report no taste, 10 more squeezes are produced. If they report a taste, the sensitivity is reported as 20. If no taste is detected, ten more squeezes are produced. If this produces a taste report, the sensitivity is reported as 30. If the subject fails to detect the taste after 30 squeezes, the subject is not sensitive to Bitrex and the test is terminated.

Pre-Qualitative Fit Test Procedures

The employee shall properly don the respirator and wear it for at least 5 minutes prior to commencing the fit test.

E.H. & S. shall review this protocol with the employee prior to testing.

The employee shall perform the conventional user seal checks as later described.

E. H. & S. may use sodium saccharine as a secondary challenge agent if the employee cannot detect Bitrex, or fails the Bitrex based fit test. The sensitivity test and fit test protocol is identical to the Bitrex protocol.

The challenge agent qualitative fit test will continue for at least one minute per exercise

The following exercises will be performed in the hood with the challenge agent:

Normal Breathing
Deep Breathing
Turning head side to side
Moving head up and down
Talking (rainbow passage)

" The Rainbow Passage"
When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The Rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend a boiling pot of gold at one end. People look but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow....-

Grimace (15 seconds)
Bending Over
Normal Breathing
Jogging in place
Normal breathing

If the challenge agent is detected by the employee at any time during the fit test the test will stop. The employee will then remove the fit test hood and respirator, and wait 15 minutes. Another respirator will be selected and re-tested.

Employees passing the test may use respirators in atmospheres up to **ten times the Personnel Exposure Limit (PEL)** listed in Table AC-1 for the material they are working with.

Saccharin Solution Aerosol Test (Alternative to Bitrex)

The saccharin solution protocol described in CCR, Title 8, sec. 5144, App. A will be used if an employee shows they are not sensitive to Bitrex. Additionally, if, during equipment failures, quantitative fit testing cannot be applied to employees requiring the use of tight fitting respirators, qualitative fit testing shall be employed, using Bitrex as the primary challenge and saccharin solution aerosol test procedure as the secondary challenge agent as detailed in CCR Title 8, sec 5144 Appendix A.

- Sensitivity test

This test is conducted to assure that the individual being fit tested can detect the taste of the test solution at very low levels. The test subject should not eat, drink or chew gum for fifteen minutes prior to the test.

The subject dons the fit test hood (3M FT 14/15) without a respirator in place.

The subject is instructed to breathe through the mouth only with the tongue slightly out of the mouth.

The solution is injected into the hood with 10 squeezes of the injection bulb.

The subject is asked if they can detect the taste of the solution. If tasted, the number of squeezes is noted as 10 and the fit test begins.

If the taste is not detected, another 10 squeezes are injected into the hood. If the subject detects the taste during any of these applications, the number is recorded as 20 and the fit test begins.

If the subject still cannot detect the saccharine 10 more squeezes are injected until thirty squeezes are achieved. If saccharine is detected at any of the subsequent 10 squeezes, the number is recorded as 30 and the fit test begins.

If the above threshold test is successful, and the employee is able to detect the presence of saccharin solution, the following fit test protocol shall be used.

The subject shall not eat or drink anything, except plain water, for 15 minutes prior to the test.

The subject dons the selected respirator and dons the fit test enclosure hood.

A number of squeezes equal to the sensitivity number is introduced into the enclosure. Every 30 seconds, a number of squeezes equal to half the sensitivity number is replenished into the enclosure.

The following exercises are performed:

- Normal Breathing
- Deep Breathing
- Turning head side to side
- Moving head up and down
- Talking (rainbow passage)

" The Rainbow Passage"

-When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The Rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend a boiling pot of gold at one end. People look but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow....-

- Grimace (15 seconds)
- Bending Over
- Normal Breathing
- Jogging in place
- Normal breathing

A fit test is successful if the entire routine results in the subject not reporting the taste of saccharin.

VI Operating Procedures

The operating instructions for each type of respirator and information on the limits of each must be followed carefully to gain the maximum benefit and protection.

- **Filtering Facepiece (Single use disposable respirators)**

  There are various types of filtering facepiece respirators that have been approved for exposures to low concentrations of certain dusts or aerosols.

  There are limitations on filtering facepiece respirators and they cannot be used in oxygen deficient atmospheres. NIOSH has ratings for single use dust masks as follows:
  N - for non-oily particulates
  R - for oil mists and particulates
  P – for both oily and non-oily mists and particulates.

  Additionally, there are three efficiency ratings for each type, as follows:
  95 - filters 95% of particulates down to 0.5 microns in diameter
  99 - filters 99% of particulates down to 0.3 microns in diameter
  100 – filters 99.97% of particulates down to 0.3 microns in diameter

  Put on a filtering facepiece and adjust the straps (if the unit has adjustable straps) for a proper fit. Pinch the noseband slightly (if the unit is so equipped) such that the mask seals around the nasolabial fold.

When the respirator is in place, and has been applied to accommodate required eye protection if such PPE is appropriate, a user seal check must be performed. Refer to specific respirator training materials for the proper procedure.

Discard an N or P filtering facepiece after use or when normal breathing becomes difficult. Discard an R filtering facepiece after one 8 hour shift.

- **Tight Fitting Respirators**

Employees using tight fitting respirators will perform the following checks prior to completing tasks requiring the use of tight fitting respirators.

- Fit Check

Negative Pressure Fit Check.

The employee closes off the respirator inlet and inhales. A vacuum and partial inward collapse of the mask should result. If a vacuum cannot be maintained for at least ten seconds, readjust the face piece and try again.

Positive Pressure Fit Check

The employee closes off the exhalation valve and breathes out gently. Air should escape through any gaps in the seal. If a slight positive pressure cannot be maintained without escape of the air for at least ten seconds, readjust the face piece and try again.

- Air Purifying Negative Pressure Half Mask Respirators

Half mask respirators can be used with P100 filters. Other cartridges are available that protect against organic and other chemical contaminants in low concentrations.

Since this type of respirator does not supply air, it cannot be used in oxygen deficient atmospheres, Immediately Dangerous to Life or Health (IDLH) atmospheres **or in confined spaces.** It can only be used for contaminants listed on the canister. The employee should leave an area when they detect a taste or smell inside the mask or when breathing resistance increases.

The procedures to don the respirator are:

Hold the mask so the narrow nose clip points upward.

Grasp both lower mask straps and hook them behind the neck.

Grasp both top straps and hook them behind the head and above the ears for proper fit.

Adjust the straps so the fit is snug but comfortable

Check for leaks with a fit check, positive and negative.

Change the filters or cartridges on the half mask respirator when the ESLI (**end of service life indicator**) on the cartridge changes. If there is no ESLI, change the filter/cartridge after each completed task requiring a respirator, or every 8 hours, or whenever the employee tastes or smells the contaminant inside the mask.

Full Face Mask respirators offer more protection than half face respirators, but do not provide air and thus cannot be used in oxygen deficient atmospheres.

- Tight Fitting Full Face Mask Respirators

Full face mask respirators provide more protections that half mask because their shape allows a better mask to face seal. They also protect the eyes from irritating vapors and dusts. Full face mask come with selective types of filters and canisters that are dependent on the protection required.

Tight fitting full face masks have the same limitations as do the half masks. Additionally, standard eyeglasses interfere with the mask to face seal and therefore special accommodations must be made for those users of full face masks.

To don a full face mask:

Loosen all straps, pull the harness over the head, and place the chin in the chin cup.

Pull the head harness will down on the back of the head.

Tighten the harness gently, starting with the bottom straps and then the middle straps and last the top straps.

Check the fit by closing off the air in-take and gently inhaling. The employee should hold their breath for a few seconds to maintain a collapsed mask during this time.

Change the filters or cartridges on the half mask respirator when the ESLI **(end of service life indicator)** on the cartridge changes. If there is no ESLI, change the filter/cartridge after each completed task requiring a respirator, or every 8 hours, or whenever the employee tastes or smells the contaminant inside the mask.

Self-Contained Breathing Apparatus's provide air in oxygen deficient atmospheres and in high concentrations of contaminated areas.

- Self-Contained Breathing Apparatus (SCBA)

SCBA units provide the user with a pure supply of type "D" breathing air regardless of ambient conditions. They must be used in atmospheres unsuitable for air purifying respirators. This includes IDLH atmospheres, confined spaces, and emergencies where breathing hazards may exist. SCBA units may used in IDLH atmospheres only in conjunction with a positive pressure full face mask.

The air supply in a SCBA is usually 30 or 60 minutes depending on the bottle capacity. Heavy exertion and stress will significantly reduce this amount of time. An alarm bell sounds when five minutes of oxygen air remaining in the bottle and the wearer should then leave the area immediately. No one should work in a contaminated atmosphere alone, a standby with SCBA equipment and Communications equipment should always be nearby.

- Specialized Respiratory Protective Equipment

  Use of a pressure demand, airline system may be permitted in an IDLH atmosphere under certain circumstances.

  The Director of Environmental Health and Safety must directly approve of this type of protective equipment or any other specialized respiratory equipment prior to purchase.

  Powered Air Purifying Respirators (PAPR) may be utilized as required for operations wher3e long term air purifying use may be required. Departments requesting this type of equipment must consult with the Director, Environmental Health and Safety regarding the need for PAPR and desirable alternatives to the use of this type of equipment.

VII Maintenance and Care

Degradation of the effectiveness and possible contamination can occur if proper care and maintenance and care are neglected.

- Inspection

  Examine the conditions of the mask, straps, valves, and filter elements before and after each use and during cleaning.

  Examine the condition of the air hose, hose clamps and gaskets before and after each use.

  Inspect for cleanliness

  Inspect for display of NIOSH or MSHA approval code

  Inspect for mask approval for the hazardous atmosphere to which the worker will be exposed.

- Cleaning and storing

  After removing the filter and or straps, wash the respirator in a mild bleach solution and air dry or immerse the respirator in a sanitary solution recommended by the manufacturer for at least two minutes

  After washing or immersing the respirator, rinse it thoroughly to prevent dermatitis from residue on the mask.

- Storage

  Respirators can be permanently damaged if they are not stored properly. After use, clean, sanitize, and store respirators in re-sealable plastic bags.

  Protect respirators from sunlight, dust, chemicals, moisture and extreme temperatures.

- Repair

  If repair is required, use only replacement parts from the same manufactured brand and type of equipment.

  Some repair part inventory for university respiratory equipment is maintained by the office of Environmental Health and Safety.

  Repair of SCBA equipment must only be performed by certified repair providers.

VIII Emergency Use of Respirators

An emergency can be defined as "an unforeseen combination of circumstances that calls for immediate action." An "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."(CCR T8 5144)

- Emergency Situations

  Respiratory hazards often occur during emergencies when police or other emergency service personnel need immediate entry into a fire or accident scene. Other types of breathing hazards may occur when personnel are exposed to hazardous substances while trapped by an accident or escaping from the scene of a fire or accident, or when they are exposed to hazardous material spills. An unforeseen chemical reaction may also result in an over exposure to hazardous substances.

- Acceptable Types of Equipment During Emergencies

  Each respiratory device has a limited ability to protect health. During emergency entry, when there is usually neither time nor opportunity to evaluate the degree of exposure, only SCBA operating in the pressure demand mode should be used. SCBA are approved for use in IDLH atmospheres. After the type and degree of breathing hazards are evaluated, other respiratory equipment may be recommended.

- Reports

  Following any incident where emergency respirator protective equipment has been used, Environmental Health and Safety shall be notified in writing, as soon as possible.

IX Recordkeeping

Records of respirator training and fit testing are maintained by the office of Environmental Health and Safety. Records retention

Monthly checks of Emergency Use Respirators will be conducted by E.H. & S. These records will be kept for three years.

X Aerosol Transmissible Disease Exposure Control Annex (CCR, T8, Section 5199)

In compliance with CCR, T8, section 5199 the following Exposure Control and Respiratory Protection Annex for CSULB is provided.

A. The Director, Environmental Health and Safety is responsible for administering this annex and updating as required.
B. The following job classifications may have occupational exposure to Airborne Infectious Disease (AirID) at CSULB:
    a. Physicians, nurses or other licensed health care professionals working at the University Student Health Services Center involved in diagnosis, triage, direct patient care and treatment.
    b. Support personnel working at the University Student Health Services Center whose job assignments place them within 6 feet of persons expressing aerosol transmissible disease symptoms.
    c. University Police Officers.
    d. Facilities Management Custodial employees.
    e. Facilities Management building service engineers.
C. No high hazard procedures as defined in CCR, T8, sec. 5199 (b) are performed at Student Health Services Center.
D. Work Assignment Listings
    a. Job assignments involving the professional practice of medicine and allied health care professions may be required to use personal protective equipment including respiratory protection.
    b. University Police, in transporting potential ATP cases from class, other academic areas or common university areas, or residence halls, may be required to use personal protective equipment including respiratory protection.
    c. Facilities Management Custodial employees assigned to custodial service tasks in the Student Health Center may be required to use personal protective equipment including respiratory protection.
    d. Facilities Management Building Service Engineers when providing service on HVAC system components installed in Student Health Services may be required to use personal protective equipment including respiratory protection.
E. Engineering controls for Student Health Services include regular service intervals of building air handling and distribution systems to ensure optimum performance of the building HVAC system, as recommended by the current ASHRAE standards applicable to Student Health Services. Work practice controls include regular in-service training for staff on the importance of proper hand washing practice, along with full adoption of all CDC and NIH guidelines relative to the control of infectious disease in health care settings. To reinforce the hand wash behavior, independent hand sanitization stations are located throughout the Student Health Services building, along with instructions on use, and motivational literature designed to encourage hand sanitization etiquette. Student Health Services custodial staff take the same in-service training as administrative and clinical staff, along with their own regular staff training regarding cleaning and sanitizing of building components. Consistent with CDC guidelines for institutions of higher learning, there are no recommendations for moiré aggressive decontamination procedures than those normally employed by best practice custodial operations in schools and colleges. CSULB will continue to use cleaning chemistry and processes that are considered current industry

standard. Student Health Services personnel and other identified job classifications with occupational risk for AirId will be provided with personal protective equipment by the university that is appropriate to their jobs. Clinical staff will be provided with eye protection, and disposable gowns, non-latex single use gloves, and disposable foot covers if required. Other job classifications with occupational risk for AirId will be provided with non-latex gloves. All job classifications identified will be medically assessed, trained, and fit tested with the appropriate N-95 single use filtering facepiece respirator.

F. Source control measures to be utilized in all work areas where persons with suspected AirId symptoms are encountered will be surgical masks and alcohol hand sanitizers made available to those persons.

G. CSULB will use the following procedures regarding isolation of employees who report ILI/AirId symptoms:

a. Employees who suspect they are symptomatic to ILI/AirId are encouraged to stay home and seek treatment form their normal providers. Employees who have ILI symptoms should self-isolate from other family members, practice good hand hygiene, use source control methods (surgical masks) when around other family members, and remain away from work or public gatherings until 48 hours after fever and frank symptoms have abated.
b. Employees who report to work, and later develop ILI symptoms will be encouraged by their supervisors or appropriate administrators to take sick leave and remain away from work until fever and frank symptoms have abated.

Student Health Services treats only normally matriculated students, and as such does not treat employees. Isolation procedures engaged by Student Health Services for students who present with ILI/AirId symptoms include, after initial contact with PLHCP personnel:

c. If patient does not reside in on campus housing, patient advised to go home and self-isolate until no longer symptomatic.
d. If patient is housed on campus, SHS will contact Housing and Residential Life and advice that a resident is symptomatic for ILI. The patient/student will be housed in a single room, equipped with a dedicated ventilation and heating system. Further actions will be dictated by medical requirements.

H. Employee medical services are provided by the university through a contract occupational medical provider. Required vaccinations, either enumerated in this standard or elsewhere in CCR, Title 8, General Industry Safety Standards, are provided to appropriate employee job classifications as required by this cited standards. Employees who are offered required vaccinations, but decline, are required to sign a declination of vaccination form, which becomes a part of the employee's permanent medical record. If a required vaccine is requested by the university from the contract medical provider, and there is a delay in vaccine delivery, the contractor will provide a written declaration to the university enumerating the unavailability of the vaccine currently, and an estimate of when the vaccine will be available.

I. If the university is informed that an employee may have an reportable aerosol transmissible disease (RATD) or been exposed to someone who may have a RATD, the following actions shall be taken:

a. Within 72 hours of the time the university was informed regarding the potential occupationally related exposure, the pertinent facts surrounding the exposure will be gathered by the appropriate administrator to determine if a significant exposure may have occurred (significant exposure means working within 6 feet of a suspected ILI/AirId person, or being directly exposed to aerosol droplets from a person with suspected ILI/AirId).This report and subsequent required reporting and decision making shall be conducted by a campus employee with demonstrated knowledge of epidemiology and the methods for controlling infectious disease exposure. If a determination is made that a significant exposure to a university employee has not occurred, and that no post-exposure prophylaxis is required, the information used to make that determination shall be documented. (Note: may need a significant exposure investigation form)

b. Within 96 hours maximum of the significant exposure, the university shall notify employees in adjacent work stations regarding the nature of the potential exposure.

c. As soon as feasible, the university shall provide post exposure medical evaluations to employees who may have had a significant exposure to the index case. The medical evaluation shall be performed by the university occupational medical provider, unless the affect employee has a current use

J. CSULB will assess each suspected exposure incident involving an employee according to established incident investigation protocols detailed in the University Injury and Illness Prevention Program. Refer to that document for written procedures.

K. Managers and supervisors shall maintain current public health information provided by the university Student Health Services on AirID cases at CSULB. Regular briefings shall be provided to employees that may have occupational exposure to AirIDs. The briefings shall be recorded and maintained as required by CSU Record Retention guidelines.

L. Information regarding any reportable disease occurrence on campus will be made by appropriate university officials to the authority having jurisdiction regarding public health and reportable infectious disease. All HIPA (Health Insurance Portability and Accountability Act) guidelines regarding patient confidentiality will be observed as required.

M. CSULB Student Health Services, University Police, and any additionally identified campus departments or offices where occupational exposure to AirIDs may occur will procure and maintain adequate supplies of N-95 respirators, in required sizes. Methods for ensuring adequate supplies shall be developed by the individual identified departments based on the following general guideline. Departments will maintain a list of trained medically evaluated, and fit tested employees (based on their exposure potential). Each department shall maintain a supply of N-95 respirators sufficient to supply one unit per covered employee per shift, plus 5% for additional incidental use. If a city, county, region or national health emergency is declared, the department shall increase its incidental reserve by 5%.

N. CSULB managers and supervisors shall ensure that initial and update training on the requirements of this plan are provided to all employees in their respective areas of

responsibility. All training shall be documented, with records of the training maintained by the custodian of records for E. H. and S. training (Director-CSULB Environmental Health and Safety).

O. Medical records generated by employees treated for occupationally acquired illnesses will be maintained as required and stipulated in the University Medial Monitoring Plan and by the CSU System Executive Order 1031. The provisions of the Health Insurance Portability and Accountability Act (HIPAA) also govern the maintenance and access to employee medical records.

P. CSULB managers and supervisors shall hold regular "tailgate safety" briefings for their staff, recording the date, subject, and agenda for each meeting. At these meetings, during identified public health emergencies and during quiescent periods, employees and their supervisors and managers shall exchange information regarding the provisions of this plan, and any other information regarding AirIDs that may be germane.

Q. **The university will not provide surge capacity services for local public health agencies. Surge processes on campus will be guided by local city of Long Beach Department of Health and Human Services guidelines, and directives from the CSU Chancellor's office.**

XII Program Evaluation

The effectiveness of the Respiratory Protection Program will be evaluated annually by comprehensive examination of employees in the program.

A 15 question review of program elements and operational requirements will be developed from a pool of appropriate questions. (Attachment "A" page 28)

The examination will be administered during the annual fit test period for each employee.

The examination will be customized to conform to each specific trade, or user profile.

There will be no passing score, but refresher training will be required for those employees scoring below 70%.

Examinations will be kept on file for three years.

XIII Definitions

The following definitions are important terms used in the respiratory protection standard in this section.

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

Assigned protection factor (APF) - Reserved

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

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

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

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

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

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

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

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

Filtering facepiece (single use disposable) 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. Typical respirators in this category are designated N (not oil resistant), R (oil resistant) , and P (oil proof). There are three efficiency ratings (95%, 99%, and 99.97%). Thus a respirator often recommended for general use for particulate or aerosol protection involving non-oily agents is designated N-95.

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

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

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

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

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

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

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

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

Maximum use concentration (MUC) – a value derived from the product of the following : the assigned protection factor (APF) of a specific respirator multiplied by the Cal/OSHA Permissible Exposure Limit (PEL) for a specific material or compound.

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

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

Physician or other licensed health care professional (**PLHCP**) means an individual whose legally permitted scope or practice (i.e., license, registration, or certification) allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the health care services required by subsection (e) of 5144.

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

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

Pressure demand respirator means a positive pressure atmosphere-supplying respirator that admits breathing air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.

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

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

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

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

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

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

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.

Appendices

Appendix A

CSULB RESPIRATORY PROTECTION PROGRAM PROGRAM EVALUATION INSTRUMENT

This evaluation will assist the office of Environmental Health and Safety in assessing the effectiveness of the training elements of the Respiratory Protection Program. Please read the questions carefully and write your answer in the space provided.

Why is a respirator needed for your job or process?

Why will improper fit, usage, or maintenance compromise the effectiveness of the respirator?

What are the limitations and capabilities of your respirator?

What should you do if there is an emergency situation regarding your respirator?

What should you do if your respirator malfunctions?

What are the critical steps necessary when putting your respirator on?

What are the critical steps when removing your respirator?

What are the critical elements involved in inspecting your respirator prior to use?

What is the proper method for storing your respirator?

Describe the maintenance routine for evaluating the effectiveness of your respirator?

List some of the medical signs and symptoms that could prevent effective use of your respirator.
Answer the following questions either True or False.

Wearing a beard will not affect the fit factor of a tight fitting respirator.

☐ True ☐ False

Tight fitting negative air purifying respirators can be used in oxygen deficient atmospheres.

☐ True ☐ False

I may bring any respirator I choose from home to use on the job.

☐ True ☐ False

All respirators must be certified by OSHA.

☐ True ☐ False

Appendix E

California State University, Long Beach

Occupational Health Program

Employee Respirator Evaluation Findings

This form is to be sent or given directly to the employee by the PLHCP.

Employee Name _____ Date of Exam _____

Home Address _____

Recently you had a medical examination in our office. The results of this examination follow:

Note; not all protocols may have been required by the Physician.

Respirator Evaluation Questionnaire	Normal ☐	Abnormal ☐ _____

Medical History:	Normal ☐	Abnormal ☐ _____		
Physical examination:	Normal ☐	Abnormal ☐ _____		
Audiogram:	Normal ☐	Abnormal ☐ _____		
Chest X-Ray: No active disease ☐	Normal ☐	Abnormal ☐	Not indicated ☐	
Breathing tests:	Normal ☐	Abnormal ☐ _____		
Laboratory tests:	Normal ☐	Abnormal ☐ _____		
EKG:	Normal ☐	Abnormal ☐		

Other comments:

☐ Your evaluation was normal.

☐ The abnormalities noted above should be followed up with your personal physician. Copies of your medical record will be furnished upon your signed request.

☐ The abnormalities noted above have resulted in restrictions in your work duties or in your use of personal protective equipment as described in the accompanying Medical Evaluation Form.

If you have any questions, please do not hesitate to call me.

Name of physician _____ _____

Printed name Signature of Physician

Appendix D

California State University, Long Beach

Occupational Health Program

Respirator Evaluation Results for release to the University

(To be filled out by the PLHCP after reviewing the questionnaire)

EXAM / Evaluation:

- ☐ Initial Respirator Evaluation
- ☐ Routine Periodic Respirator Evaluation
- ☐ Exit Respirator Evaluation

Employee Classification _____ Evaluation Date _____

Employee _____ Employee ID No. _____

The following recommendation is based on a review of base history questionnaire required by Cal-OSHA standards CCR Title 8; section 5144. The Physician or Licensed Health Care Provider may require other diagnostic tests, physical examinations and the specific requirements of the position applied for or occupied by the individual named above.

Has the employee an detected medical conditions that would increase their risk of material health impairment from occupational exposure or respirator usage? ☐ **Yes** ☐ **No** ☐ **Undecided**

Does the employee have any limitations in the use of personal protective equipment (e.g., clothing or respirators) ? ☐ **Yes** ☐ **No** ☐ **Undecided**
Please explain:

Does the employee need follow-up with a physical examination or further diagnostic exams / tests? ☐ **Yes** ☐ **No** ☐ **Undecided**

Status:

☐	Respirator Qualified	The examination indicates no significant medical impairment, can be assigned any work consistent with skills respirator use.
☐	Respirator Qualified	The examination indicates non-occupational medical impairments, referred to personal physician for follow-up. Can be assigned to any work consistent with respirator usage.
☐	Respirator Qualified	-With limitations and or conditions listed; Limitations are:
☐	Respirator **NOT** Qualified	

The employee has been informed in writing of the evaluation findings.

_____ _____

Physician's Signature Date

Appendix C

California State University, Long Beach

Respiratory Protection Program

Authorization to Release Previous Medical Information

Date: _____

I, _____, authorize the release of my medical examinations and test results from my previous places of employment to California State University, Long Beach (CSULB), office of Environmental Health and Safety (EHS). California State University, Long Beach office of Environmental Health and Safety will receive and forward all medical records pertinent to me and my employment at California State University, Long Beach to California State University, Long Beach's Student Health Services (SHS) for storage from my previous places of employment. These records will be kept in confidence, and will not be made available to anyone, except the physician, medical records manager and the official State regulatory officials, e.g., Cal/OSHA.

Be sure to include address of previous employer. Use a separate sheet of paper , if necessary , to list previous employers if there has been more than one during the past three years, and the employers have medical results on this employee.

_____

Signature of Employee

_____

Employee Identification Number

Appendix B

California State University, Long Beach

Occupational Health Program

Authorization to Release Medical Information

Date: _____

I, _____, authorize the release of my medical examinations and test results to California State University, Long Beach (CSULB), office of Environmental Health and Safety (EHS). California State University, Long Beach office of Environmental Health and Safety will receive and forward all medical records pertinent to me and my employment at California State University, Long Beach to California State University, Long Beach's Student Health Services (SHS) for storage. These records will be kept in confidence, and will not be made available to anyone, except the physician, medical records manager and official State regulatory officials, e.g., Cal/OSHA.

_____

Signature of Employee

_____

Employee Identification Number

Appendix F

Cal/OSHA Respirator Medical Evaluation Questionnaire (Mandatory)

To the employer:

Answers to questions in Section 1, and to question 9 in Section 2 of Part A, do not require a medical examination.

To the employee:

Check Yes or No.

Your employer must allow you to answer the 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. (Mandatory)

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

Today's Date _____ Your Name _____

Your Age (to the nearest year) _____ Sex ☐ Male ☐ Female

Your height _____ feet _____ inches Your weight _____ lbs.

Your job title _____

A phone number where you can be reached by the health care professional who reviews the questionnaire (include area code) _____

The best time to phone you at this number _____

Has your employer told you how to contact the health care professional who will review this questionnaire? ☐ 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)

☐ Other type (for example, half-or full-face piece type , powered air purifying, supplied-air, self-contained breathing apparatus)

Have you worn a respirator? ☐ Yes ☐ No

If "yes" what type(s)?

Part A. Section 2. (Mandatory)

The following questions must be answered by every employee who has been selected to use any type of respirator (please check "yes" or "no").

Do you currently smoke tobacco, or have you smoked tobacco in the last month?	☐ **Yes** ☐ **No**
Have you ever had any of the following conditions?	
Seizures (fits):	☐ Yes ☐ No
Diabetes (sugar disease):	☐ Yes ☐ No
Allergic reactions that interfere with your breathing:	☐ Yes ☐ No
Claustrophobia (fear of closed-in places):	☐ Yes ☐ No
Trouble smelling odors:	☐ Yes ☐ No
Have you ever had any of the following pulmonary or lung problems?	
Asbestosis:	☐ Yes ☐ No
Asthma:	☐ Yes ☐ No
Chronic bronchitis:	☐ Yes ☐ No
Emphysema:	☐ Yes ☐ No
Pneumonia:	☐ Yes ☐ No
Tuberculosis:	☐ Yes ☐ No
Silicosis:	☐ Yes ☐ No
Pneumothorax (collapsed lung):	☐ Yes ☐ No
Lung cancer:	☐ Yes ☐ No
Broken ribs:	☐ Yes ☐ No
Any chest injuries or surgeries:	☐ Yes ☐ No
Any other lung problem that you've been told about:	☐ Yes ☐ No
Do you currently have any of the following symptoms of pulmonary or lung illness?	
Shortness of breath:	☐ Yes ☐ No
Shortness of breath when walking fast on level ground or walking up a slight hill or incline:	☐ Yes ☐ No
Shortness of breath when walking with other people at an ordinary pace on level ground:	☐ Yes ☐ No

Have to Stop for breath when walking at your own pace on level ground:	☐ Yes ☐ No
Shortness of breath when washing or dressing yourself:	☐ Yes ☐ No
Shortness of breath that interferes with your job:	☐ Yes ☐ No
Coughing that produces phlegm (thick sputum):	☐ Yes ☐ No
Coughing that wakes you early in the morning:	☐ Yes ☐ No
Coughing that occurs mostly when you are lying down:	☐ Yes ☐ No
Coughing up blood in the last month:	☐ Yes ☐ No
Wheezing:	☐ Yes ☐ No
Wheezing that interferes with your job:	☐ Yes ☐ No
Chest pain when you breathe deeply:	☐ Yes ☐ No
Any other symptoms that you think may be related to lung problems:	☐ Yes ☐ No

Have you ever had any of the following cardiovascular or heart problems?

Heart attack:	☐ Yes ☐ No
Stroke:	☐ Yes ☐ No
Angina:	☐ Yes ☐ No
Heart failure:	☐ Yes ☐ No
Swelling in your legs or feet (not caused by walking):	☐ Yes ☐ No
Heart arrhythmia (heart beating irregularly):	☐ Yes ☐ No
High blood pressure:	☐ Yes ☐ No
Any other heart problem that you've been told about:	☐ Yes ☐ No

Have you ever had any of the following cardiovascular or heart symptoms?

Frequent pain or tightness in your chest:	☐ Yes ☐ No
Pain or tightness in your chest during physical activity:	☐ Yes ☐ No
Pain or tightness in your chest that interferes with your job:	☐ Yes ☐ No
In the past two years, have you noticed your heart skipping or missing a beat:	☐ Yes ☐ No
Heartburn or indigestion that is not related to eating:	☐ Yes ☐ No
Any other symptoms that you think may be related to heart or circulation problems:	☐ Yes ☐ No

Do you currently take medication for any of the following problems?

Breathing or lung problems: ☐ Yes ☐ No

Heart trouble: ☐ Yes ☐ No

Blood pressure: ☐ Yes ☐ No

Seizures (fits): ☐ Yes ☐ No

If you've ever 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:)

Eye irritation: ☐ Yes ☐ No

Skin allergies or rashes: ☐ Yes ☐ No

Anxiety: ☐ Yes ☐ No

General weakness or fatigue: ☐ Yes ☐ No

Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire? ☐ **Yes** ☐ **No**

The following questions 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.

Have you ever lost vision in either eye (temporarily or permanently)? ☐ **Yes** ☐ **No**

Do you currently have any of the following vision problems?

Wear contact lenses: ☐ Yes ☐ No

Wear glasses: ☐ Yes ☐ No

Color blind: ☐ Yes ☐ No

Any other eye or vision problem: ☐ Yes ☐ No

Have you ever had an injury to your ears, including a broken eardrum: ☐ Yes ☐ No

Do you currently have any of the following hearing problems?

Difficulty hearing: ☐ Yes ☐ No

Wear a hearing aid: ☐ Yes ☐ No

Any other hearing or ear problem: ☐ Yes ☐ No

Have you ever had a back injury? ☐ **Yes** ☐ **No**

Do you currently have any of the following musculoskeletal problems?

Weakness in any of your arms, hands, legs, or feet: ☐ Yes ☐ No

Back pain: ☐ Yes ☐ No

Difficulty fully moving your arms and legs: ☐ Yes ☐ No

Pain and stiffness when you lean forward or backward at the waist: ☐ Yes ☐ No

Difficulty fully moving your head up or down: ☐ Yes ☐ No

Difficulty fully moving your head side to side: ☐ Yes ☐ No

Difficulty bending at your knees: ☐ Yes ☐ No

Difficulty squatting to the ground: ☐ Yes ☐ No

Climbing a flight of stairs or a ladder carrying more than 25 lbs: ☐ Yes ☐ No

Any other muscle or skeletal problem that interferes with using a respirator: ☐ Yes ☐ No

Part B. Section 2.

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.

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

---

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, please describe:

Have you worked with any of the materials listed below?

Asbestos: ☐ Yes ☐ No

Silica (e.g., in sandblasting): ☐ Yes ☐ No

Tungsten/cobalt (e.g., grinding or welding this material): ☐ Yes ☐ No

Beryllium: ☐ Yes ☐ No

Aluminum: ☐ Yes ☐ No

Coal (for example, mining): ☐ Yes ☐ No

Iron: ☐ Yes ☐ No

Tin: ☐ Yes ☐ No

Dusty environments: ☐ Yes ☐ No

Any other hazardous exposures: ☐ Yes ☐ No
If “yes”, Please explain:

List any second jobs or side businesses you have:

List your previous occupations:

List your current and previous hobbies:

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

If “yes”, Please explain:

Have you ever worked on a HAZ.MAT team? ☐ **Yes** ☐ **No**

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:

Will you be using any of the following items with your respirator(s)?

HEPA Filters: ☐ Yes ☐ No

Canisters (for example, gas masks): ☐ Yes ☐ No

Cartridges: ☐ Yes ☐ No

How often are you expected to use the respirator(s) (check "yes" or "no" for all answers that apply to you)?

Escape only (no rescue): ☐ Yes ☐ No

Emergency rescue only: ☐ Yes ☐ No

Less than 5 hours per week: ☐ Yes ☐ No

Less than 2 hours per day: ☐ Yes ☐ No

2 to 4 hours per day: ☐ Yes ☐ No

Over 4 hours per day: ☐ Yes ☐ No

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

Light (less than 200 kcal per hour): ☐ Yes ☐ No

If "yes," how long does this period last during the average shift: 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. __ hrs. __ mins.

Moderate (200 to 350 kcal per hour): ☐ Yes ☐ No

If "yes," how long does this period last during the average shift: 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-degreegradeabout 3 mph; or pushing a wheelbarrow with a heavy load (about 100 lbs.) on a level surface. __ hrs. __ mins.

Heavy (above 350 kcal per hour): ☐ Yes ☐ No

If "yes," how long does this period last during the average shift: 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.). __ hrs. __ mins.

Will you be wearing protective clothing and/or equipment (other than the respirator) when you're using the respirator? ☐ **Yes** ☐ **No**

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

Will you be working under hot conditions (temperature exceeding 77 deg. F)? ☐ **Yes** ☐ **No**

Will you be working under humid conditions? ☐ **Yes** ☐ **No**

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

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

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 first toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of second toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of 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:

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):

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Attachment G

Employee Respiratory Protection Summary

- Covered employees:
  A university employee who has the occasion to use any form of respiratory protective equipment in the assigned normal course and scope of their duties.

- Examinations:
  Persons should not be assigned to tasks requiring the use of respirators unless it has been determined that they are physically able to perform the work while using the required respiratory equipment. A physician or other licensed health care provider shall determine what health and physical conditions are pertinent.

- Frequency:
  The medical status of persons assigned use of respiratory equipment shall be reviewed biannually.

- Protocol:

  Mandatory tests:
  1. Comprehensive medical examination with emphasis on respiratory and cardiovascular condition.
  2. Pulmonary function test.

  Optional tests:
  1. Singleview (PA) Chest X-Ray
  2. Electrocardiogram

- Physicians Report
  Shall indicate if there are any restrictions to the use of respiratory protective equipment; shall indicate what levels of respiratory equipment may be worn.