## DOCUMENT REVISION LOG

**Document:** Respiratory Protection

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# Acronyms & Definitions

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<td>Assigned Protection Factor (APF)</td>
<td>The workplace level of respiratory protection that a respirator or class of respirators is expected to provide to employees.</td>
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<tr>
<td>Cartridge/Canister</td>
<td>A container with a filter, sorbent, or catalyst, or any combination of these items, which removes specific contaminants from the air passed through the cartridge or canister.</td>
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<tr>
<td>CHP</td>
<td>Chemical Hygiene Plan</td>
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<td>Dust</td>
<td>Material created when solid material breaks down or is crushed to produce fine air-borne particles.</td>
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<tr>
<td>Employee</td>
<td>Any person who receives compensation from the University for his/her work.</td>
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<tr>
<td>Facepiece</td>
<td>The portion of the respirator that is in contact with or covers the face.</td>
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<tr>
<td>Filter</td>
<td>A porous material through which air-borne contaminants are passed and removed by entrapment within the material.</td>
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<td>Fit-Testing</td>
<td>A qualitative or quantitative test to determine the fit of a respirator on an employee’s face.</td>
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<td>Full-Face Respirator</td>
<td>A full-face respirator that covers the entire face and includes eye protection as an integral part of the respirator.</td>
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<tr>
<td>Fumes</td>
<td>Created when metals are vaporized under high heat (i.e. welding or soldering). As the vapor cools, it condenses into extremely small particles which are respirable.</td>
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<tr>
<td>Gases</td>
<td>Substances that are similar to air in their ability to diffuse or spread freely through the atmosphere, and whose boiling points are less than room temperature.</td>
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<tr>
<td>Half-Face Respirator</td>
<td>A negative pressure, air purifying respirator that forms a seal with the area surrounding the nose and mouth.</td>
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<tr>
<td>Immediately Dangerous to Life and Health (IDLH)</td>
<td>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.</td>
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<tr>
<td>Medical Clearance</td>
<td>Approval by a Professional, Licensed Health Care Provider (PLHCP) to wear a respirator after review of the completed medical questionnaire and/or a physical examination.</td>
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<tr>
<td>Maximum Use Concentration (MUC)</td>
<td>The maximum atmospheric concentration of a hazardous substance which an employee can expect to be protected from when wearing a respirator, and is determined by the assigned protection factor of the respirator or class of respirators and the exposure limit of the hazardous substance.</td>
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<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety and Health</td>
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<tr>
<td>Oxygen Deficient Atmosphere</td>
<td>An atmosphere with an oxygen content below 19.5%</td>
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<tr>
<td>PAPR</td>
<td>A Powered Air Purifying Respirator which is battery-operated and draws particulate-contaminated air through a filter, delivers clean filtered air to the facepiece or hood at a required minimum flow to maintain positive pressure within the facepiece or hood.</td>
</tr>
<tr>
<td>PEL</td>
<td>The Permissible Exposure Limits as promulgated by OSHA (see 29 CFR 1910.1000)</td>
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<tr>
<td>PI</td>
<td>Principal Investigator</td>
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<tr>
<td><strong>Particulate Filtering Facepiece (Dust Mask or N-95)</strong></td>
<td>A NIOSH-approved negative pressure respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium. Designated N, R, or P-95, 99, or 100 by NIOSH.</td>
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<td><strong>Protection Factor</strong></td>
<td>The overall protection afforded by any certain type of respirator, which is calculated as the ratio of the concentration of contaminant outside a face mask or hood to that inside the mask while in a contaminated atmosphere.</td>
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<tr>
<td><strong>Respirator</strong></td>
<td>A device which seals to the face and is designed to protect the respiratory tract by filtering out or adsorbing/removing airborne contaminants.</td>
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<tr>
<td><strong>SCBA</strong></td>
<td>Self-Contained Breathing Apparatus which includes an air tank, regulator and hose connected to either a half-face or full-face respirator.</td>
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<tr>
<td><strong>TLV</strong></td>
<td>Threshold Limit Value for specified air contaminants as recommended by the American Conference of Governmental Industrial Hygienists (ACGIH).</td>
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<td><strong>Vapors</strong></td>
<td>The gaseous state of substances that are liquid or solid at room temperature.</td>
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<td><strong>Voluntary Use</strong></td>
<td>If a hazard assessment has been completed by SRS and the exposure risk is below what is required respiratory protection, then a student or employee may choose to use respiratory protection voluntarily. Voluntary use of respirators is forbidden for unknown or unassessed hazards.</td>
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1. **SCOPE**

This program implements the Respiratory Protection Program for employees of the University of New Mexico in accordance with 29 CFR 1910.134. This program shall be followed by all employees who are required to wear respiratory protection and by all supervisors who require employees to wear respiratory protection.

2. **RESPONSIBILITIES**

2.1. **Department of Safety & Risk Services (SRS) will:**

   a. Evaluate or coordinate the evaluation of work area(s) to measure the exposure concentrations for specific chemicals and determine the required type(s) of respiratory protection.

   b. Keep records of all work area evaluations for a minimum of 30 years.

   c. Train or coordinate the training of users initially and annually in the use and maintenance of required respiratory protection equipment.

   d. Fit-test or coordinate the fit-testing of individuals initially and annually with the required respirator and/or as physical changes occur to individuals.

   e. Determine or coordinate the determination of whether engineering or administrative controls are feasible, and as appropriate, make recommendations for chemical substitutions, administrative controls and/or engineering control revisions to minimize chemical exposure.

   f. Periodically evaluate the effectiveness of the program every 3 years or as required.

   g. Maintain a database documenting program participants, training and fit-testing dates, respirators the individual is permitted to or required to wear, and trainer’s name.

2.2. **Employee Occupational Health Services (EOHS) will:**

   a. Provide initial medical evaluations for all personnel which are identified by SRS as “requiring” respirator use on their jobs, prior to their initial respirator fit-testing and training, and otherwise as determined by the medical provider.

   b. Provide initial medical evaluations for all personnel who may voluntarily use respirators prior to their potential use of a respirator on the job, and provide these persons with a copy of Appendix D of 29 CFR 1910.134. Voluntary respirator use requires only the initial medical evaluation, unless determined otherwise by the medical provider for individual persons.

   c. Inform SRS and supervisors when employees are unable to wear a respirator, or if limitations on respirator use are determined by the medical provider.

   d. Maintain a database documenting program participants and medical authorizations.
2.3. **Supervisors or PI’s will:**

   a. Ensure that their personnel, in areas identified with potential respiratory hazards, comply with this written program.
   
   b. Ensure that all potential users (both voluntary and required use) have initial and/or current medical clearance from Employee Occupational Health Services.
   
   c. Ensure that persons required to use respirators are trained annually by SRS.
   
   d. Ensure that required users are provided with and authorized to wear the proper respirators for each specific application.
   
   e. Ensure that proper care and maintenance of required respirators are performed.
   
   f. Notify SRS of newly-assigned personnel who may be required to wear a respirator and ensure training and fitting of newly-assigned personnel by SRS.
   
   g. Notify SRS of any problems arising or mishaps occurring while respirators are in use.
   
   h. Consult SRS prior to any respirator purchases, including needed parts or arrangement for necessary repairs.
   
   i. Make sure all employees required to wear a respirator are fit-tested annually.

2.4. **Respirator users will:**

   a. Consult SRS when selecting a respirator for a particular required use and utilize only the respirators they have been fit-tested and trained to use by SRS.
   
   b. Learn and know the purpose and limitations of the respirator(s) required for their jobs.
   
   c. Prior to each donning, check the respirator for wear, cracks, holes, leaks or any other defects which could adversely affect its effectiveness. In the event defects are noted, the user will bring them to the attention of their supervisor.
   
   d. Before each use of a respirator, conduct a positive and negative fit-test. If the respirator does not pass these tests, the user will bring this information to the attention of their supervisor.
   
   e. Clean and disinfect the respirator after each use and at least monthly in accordance with section 8.1 of this procedure.
   
   f. Store the respirator(s) in an approved manner (i.e. plastic, sealing bag) and as indicated in this policy.
   
   g. Individuals with facial hair which may interfere with the face-to-facepiece seal are prohibited by OSHA regulations from wearing all respirators except for loose-fitting, hood type PAPRs.

2.5. **Contractors will:**

   Develop and implement a respiratory protection program for their employees who must enter into or work in areas where exposure to hazardous materials cannot be controlled or avoided. Their program
must meet OSHA regulations and include issuance of respirators, medical evaluation, fit-testing and training.

3. **MEDICAL EVALUATIONS**

All employees required to wear a respirator must be medically evaluated by EOHS prior to the initial training, fit-testing and use of the respirator. Employees using respirators on a voluntary basis must be initially medically evaluated by EOHS prior to being provided a respirator by their supervisor. Employees will fill out a medical questionnaire and, if necessary, complete additional screening at the discretion of the Medical Provider. OSHA does not require an annual medical evaluation. Employees are evaluated when a change occurs, detailed below. A written medical determination of the employee’s ability to wear a respirator will be provided by EOHS to the employee’s supervisor. This evaluation will be provided to UNM employees free of charge.

3.1. **Frequency**

a. Additional medical evaluations will be performed if an employee reports to EOHS any medical signs or symptoms that are related to their ability to use a respirator.

b. Observations made during fit-testing or periodic program evaluations which indicate that an employee needs to be re-evaluated.

c. A change occurs in the workplace conditions that may result in a significant increase in exposure or physiological burden on the employee.

d. When the EOHS provider, supervisor or program administrator informs the employer that an employee should be reevaluated.

e. All employees who may use a respirator in Immediately Dangerous to Life and Health (IDLH) scenarios must be medically certified on an annual basis.

4. **RESPIRATOR SELECTION**

a. Respirators will be selected based on the respiratory hazards to which employees are exposed. With the assistance of SRS, supervisors will identify the potential respiratory hazards in their work area. SRS will monitor exposures, evaluate the respiratory hazards in the workplace and determine which respirator and cartridges are appropriate. This evaluation will include workplace conditions, chemicals used and a reasonable estimate of the concentrations of the chemicals. Air monitoring for the contaminant will be conducted as deemed necessary by SRS.

b. All respirators, including disposable particulate respirators (N,R, or P-95, 99, or 100 filtering facepieces) used at the University of New Mexico must be NIOSH approved, unless used on a voluntary basis.

c. A sufficient number of respirator models and sizes will be made available by the employee’s supervisor to ensure that a respirator is acceptable to, and correctly fits, the user.
d. Masks such as the 3M 8500 Comfort Masks, or any other nuisance dust mask offered for sale by any other manufacturer are used on a voluntary basis and should be used in accordance with section 7.1 of this program and attachment D.

5. PROCEDURES FOR PROPER USE OF RESPIRATORS

5.1. Standard Operating Procedures (SOPs)
Supervisors and/or PI’s, with the assistance of SRS, will be required to develop area-specific standard operating procedures (SOPs) that list what procedures require respiratory protection. These SOPs must also list the appropriate respirators and cartridges/filters for each procedure. Templates for these SOPs are available in Attachment A. For respiratory protection use in a laboratory, the SOP should be part of the CHP in each lab.

5.2. Fit-Checks
Employees will perform user fit-tests each time they put on their respirators:

a. Exhaust Valve Positive Pressure Test: Place palm over the exhalation valve in front of the mask and exhale gently to cause a slight positive pressure buildup inside of the facepiece. If leakage is detected, reposition the respirator on the face and/or adjust the tension of the headbands to eliminate leakage. Repeat test. If the facepiece bulges slightly and no air leakage is detected around the edges or around the nose, a positive fit has been achieved.

b. Negative Pressure Test: Place palms of hands over the cartridges and/or filters, inhale gently so that the facepiece remains in a slightly collapsed condition. If air leakage is detected, reposition the respirator on the face and/or adjust tension of the headbands to eliminate leakage. If the facepiece remains in a slightly collapsed condition and no inward leakage of air is detected, the fit is considered satisfactory.

5.3. Air-Purifying Respirator Limitations
Half-face, full-face and powered air-purifying (PAPR) respirators are air-purifying respirators. These respirators use a cartridge/filter to remove a specific contaminant from the air that the wearer is breathing. Air-purifying respirators only protect against the hazards that the cartridge/filter is designed to remove. The cartridges/filters have a limited life span and must be changed regularly, based on a designated changeout schedule, if the chemical’s odor is detected, or if exposure symptoms are experienced. Air-purifying respirators must not be used in an oxygen deficient atmosphere.

a. Filtering facepiece respirators (N-95) are not to be used for paint spray, gases, vapors, asbestos, or sandblasting, as these masks provide only limited protection from very small dust particles, gases, vapors, mists, and aerosols.

b. Tight fitting respirators (half or full face) cannot be used if the employee has a beard or facial hair that interferes with the face to respirator seal.

c. PAPR (powered-air purifying respirator). This type of respirator, with a loose-fitting hood attachment, can be used by employees who have beards or other facial hair. PAPRs with a tight-fitting facepiece will be fit-tested in the negative pressure mode.
6. USE OR RESPIRATORS IN AN IDLH ATMOSPHERE OR EMERGENCY

6.1. IDLH Atmospheres

In atmospheres that are considered Immediately Dangerous to Life and Health (IDLH), maximum respiratory protection must be worn by employees. The respirator must be a full-facepiece pressure-demand SCBA certified by NIOSH for a minimum service life of thirty minutes or a combination full-facepiece pressure demand supplied-air respirator with auxiliary self-contained air supply. Respirators provided only for escape from IDLH atmospheres must be NIOSH certified for escape from the atmosphere in which they will be used.

IDLH atmospheres include:

a. Atmospheres in which the contaminant concentration exceeds the IDLH concentration or is unknown but may be life threatening; and/or

b. Oxygen-deficient atmospheres

If employees are required to enter an IDLH atmosphere, the buddy system must be followed. Entry will only occur with two persons entering the IDLH environment and with at least one person located outside of the IDLH atmosphere. Visual, voice or signal line communication must be maintained between the persons inside and the person outside. The employee located outside must be trained and equipped with the same level of respiratory protection to enable him/her to provide emergency rescue, if necessary.

6.2. Procedures to Ensure Adequate Air Quality, Quantity, And Flow of Breathing Air

a. All compressed breathing air will meet the ANSI/CGA requirements for Grade D breathing air (G-7.1-1989).

b. Purchased cylinders used to supply breathing air must be tested and maintained as described in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR part 173 and 178) and must not be more than 15 years old.

c. Breathing air couplings must be incompatible with outlets for non-respirable worksite air or other gas systems.

7. FIT-TESTING PROCEDURES FOR TIGHT FITTING RESPIRATORS

All personnel working in job classifications identified as requiring negative or positive-pressure respirators will be educated on the use of their respirators and will be qualitatively or quantitatively fit-tested, depending on the APF required in the employee work area. Fit-testing will occur at least annually with the same make, model, style, size, and type of respirator they have been issued. Only those personnel who have been trained and fit-tested are authorized to use respirators. No employee will be fit-tested or allowed to wear a respirator with a beard or facial hair that interferes with the face-to-facepiece seal or interferes with valve function. Additional fit-testing is required if there are significant changes (i.e. facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight) in the employee’s physical condition that may affect the respirator fit.

Supervisors are responsible for ensuring that their employees are scheduled annually for fit-testing.
See Attachment B for Fit-Testing Procedures.

7.1. Voluntary Use

Employees may voluntarily use respiratory protection limited to filtering face-piece respirators, N-95 or dust mask, and elastomeric-half face respirators if the following conditions are met:

- The exposure level has been evaluated by SRS and it is determined that the level of exposure to the contaminant is below the PEL or TLV for the contaminant; and,
- The use of a respirator poses no hazard. Functionally, this means the employee must be medically cleared, trained, and properly maintain the condition of the respirator.
- The employee is provided with Attachment D of this program.

8. Procedures for Maintaining Respirators

8.1. Cleaning and Disinfecting

a. The maintenance and cleaning program must ensure the requirements provided in the manufacturer’s inspection procedures are adhered to as a minimum acceptable program.

b. The actual cleaning and maintenance of a collective/multiple use respirator may be performed by the individual using the respirator or the task may be assigned to the section responsible for the storage and issuing of collective use respirators. Respirators used by more than one employee will be cleaned and disinfected before being worn by a different individual.

c. Individually issued respirators shall be cleaned and disinfected by the assigned user as often as necessary to be maintained in a sanitary condition.

d. Respirators maintained for emergency use shall be cleaned and disinfected after each use.

e. Respirators used in fit-testing and training shall be cleaned and disinfected after each use.

8.1.1. Procedure for Cleaning:

a. Remove filters, cartridges, or canisters. Disassemble facepiece by removing components such as valve covers and diaphragms, or other components as recommended by the manufacturer. Replace defective parts if necessary, or call SRS for assistance with repair.

b. Wash components in warm (110° F maximum) water with a mild detergent or with a cleaner recommended by manufacturer. A soft bristle brush (not wire) may be used.

c. Rinse all components thoroughly with clean, warm water. Drain.

d. Air dry in a clean area. Excess water may be absorbed by a clean paper towel. Do not use hair dryers or compressed air to speed the drying process.

e. If the cleaner doesn’t contain a disinfecting agent, respirator components should be immersed for two minutes in a fresh solution of one (1) part bleach in 1000 parts water.
f. Rinse parts thoroughly in clean, warm water and let them drain.

g. Allow them to air dry or wipe dry with a paper towel or clean, lint-free cloth.

h. Reassemble and place the face-piece in a “ziplock” type plastic bag for storage.

i. Respirators must be stored in a clean and sanitary condition. The respirator must be completely dry before storage.

j. Never use alcohol to clean the respirator. Alcohol will dry the respirator surface and cause immediate deterioration.

8.2. Storing

Do not store respirators and parts near or in:

a. Dusty areas. Dirty respirators can cause dermatitis. OSHA regulations require that respirators be stored in a clean and sanitary condition.

b. Direct sunlight. Excessive heat will deform the respirator and prevent it from having a good face to mask seal.

c. Temperature extremes. Excessive heat will deform the respirator and prevent it from having a good face to mask seal. Excessive cold can cause cracks in the facepiece causing leaks.

d. High humidity areas. Extremely humid conditions will make it difficult to maintain a good mask to face seal.

e. Near toxic chemicals. Toxic chemicals can cause dermatitis or facial burns.

Store the respirator in such a manner as to prevent the facepiece from being deformed. Do not hang the respirator from the straps. Respirators should be stored face down to prevent bowing or deformation of the inhalation valves.

Store the filters, cartridges or canisters separately from the facepiece. The weight of these can deform the respirator over a period of time. These components should also be stored in a “ziplock” type plastic bag to prevent passive absorption.

8.3. Inspecting

a. All respirators must be inspected before and after each use and at least monthly.

b. Check all parts for wear and defects. Inspect the head-band, mask, valves, connecting tube and cartridges for deterioration. Rubber parts should be checked for elasticity and cracks. Stretching and manipulating rubber parts when stored for several weeks will help prevent deterioration. The valves should be inspected for tears and any obstructions to proper sealing.

c. Check approval sticker (TC#) on filters, canisters or cartridges to verify that the right canister, filter or cartridge is being used for the hazard encountered.

d. Replace filters, canisters or cartridges when change-out schedule indicates or if physical exposure symptoms are noticed.
8.4. Repairing/Discarding

a. Only qualified personnel shall replace parts.

b. Only manufacturers' parts designated for that use shall be used. Parts are not interchangeable between manufacturers. Mixing of different manufacturer’s parts voids the certification of the respirator and may adversely affect the function of the respirator.

c. Head straps must be replaced when damaged or when the elastic becomes defective. All other repairs must be made by the manufacturer.

d. If the respirator is damaged beyond repair or if the facepiece becomes distorted, it must be discarded immediately.

g. Filtering facepieces should be discarded if they are damaged in any way, if they become excessively dirty or contaminated, or if they become difficult to breathe through.

8.5. Replacing Filters/Cartridges

A schedule will be developed for each area, with the assistance of SRS, for replacing filters. The schedule will be based on the concentrations of air contaminants and the frequency of use.

8.6. Respirator Inspection, Cleaning and Maintenance

Supervisors should audit respirator usage periodically to ensure that respirators are being maintained properly by those employees required to utilize respirators for protection.

9. TRAINING

9.1. General Training

Every University employee required to wear respiratory protection will receive Respirator Training PRIOR to respirator use. This training will be provided by SRS or a third-party vendor. It will include the following:

- Requirements of the Respiratory Protection Standard;
- Why the respirator is necessary and how improper fit, usage or maintenance can compromise the protectiveness of the respirator;
- What the limitations and capabilities of the respirator are;
- What to do if the respirator malfunctions or if the employee becomes ill while wearing it;
- How to inspect, put on, remove, use and check the seals of the respirator;
- How to maintain and store the respirator; and
- How to recognize medical signs and exposure symptoms that may limit the effective use of a respirator.

Employees will be required to demonstrate that they understand how to wear the respirator.
9.2. **Area-Specific Training**

In addition to the Respirator Training provided by SRS, employees must be provided with area-specific training. This training is to be conducted by the supervisor and will inform the employees of the following:

- Procedures in their work area that require respiratory protection;
- Areas available for storage and cleaning of respirators;
- When cartridges/filters must be discarded; and
- Where employees can get new cartridges/filters.

Respirator Training will be conducted prior to the employee’s use of any respirator and annually thereafter. Retraining will also be conducted if there is any indication that the employee cannot demonstrate that he/she has the understanding or skill to use a respirator.

Supervisors are responsible for ensuring that employees that are required to wear respirators are trained annually.

All training is documented and maintained by SRS. All training must be documented and training records kept with the lab’s Chemical Hygiene Plan. SRS will request to see training records during the annual laboratory inspection.

10. **PROCEDURES FOR REGULARLY EVALUATING THE RESPIRATORY PROTECTION PROGRAM**

The Respirator Site Evaluation Form, Attachment C, will be used to document evaluations of the effectiveness of the respiratory protection program.

This information will be evaluated every 3 years from the date of last review. The program will be modified as necessary.

11. **SAFETY PRECAUTIONS**

Before starting any hazardous operations, be sure to employ the following safety measures:

a. Be sure the respirator functions properly.

b. Do not perform any hazardous duties unless you are medically cleared, properly trained and fit-tested.

c. When the wearer detects a resistance in breathing, a taste, an odor, smells the chemicals being used or an extra effort is needed to inhale, they shall vacate the hazardous area immediately.

   - DO NOT remove the respirator until out of the hazardous area because it still offers some protection.
   - DO NOT re-enter the hazardous area until the cause of the problem is identified and repaired.
ATTACHMENT A – SOP TEMPLATE FOR RESPIRATORY PROTECTION

Location and Process/Procedure: _____________________________________________

Print a copy and keep with your Safety Data Sheets and training documents with the Laboratory Chemical Hygiene Plan.

<table>
<thead>
<tr>
<th>Department:</th>
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<tr>
<td>Supervisor or PI:</td>
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<td>Supervisor Phone #:</td>
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<td>Emergency Contact:</td>
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<td>Emergency Contact Phone #:</td>
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1. **Purpose:** In the space provided, detail the hazards posed by the procedure/equipment

2. **Procedure/Hazard Identification:** In the space provided, detail the hazards that require respiratory protection, including contaminant types and concentrations if known.
3. **Personal Protective Equipment (PPE):** *In the space provided, detail the PPE required by all personnel including respiratory type and cartridge type.*

4. **Engineering & Administrative Controls:** *In the space provided, detail the Engineering and Administrative controls used to mitigate hazards presented by the procedure/equipment.*

5. **Fit Testing performed by:**
   - □ SRS
   - □ Other: __________________

6. **Repair & Maintenance:** *In the space provided, detail the proper maintenance procedures for respirators, including the change out schedule for the respirator filter medium*
7. **Standard Operating Procedure:** In the space provided, detail the usage of respiratory protection under normal circumstances.

8. **Emergency Procedures** In the space provided below, detail emergency procedures

9. **Other Emergencies**

   **Fire or Medical Emergency -- Dial 911**

   **Life-Threatening Emergency, After Hours, Weekends and Holidays -- Dial 911**

   **Non-Life Threatening Emergency** – Call UNM Police Department at 505-277-2241. During normal business hours, call SRS at 505-277-2753 to seek assistance and report the incident. After hours, weekends and holidays, call the SRS Duty Officer pager and enter your phone number after the outgoing message: 505-951-0194

10. **Training Requirements**

    All staff using respiratory protection must be trained via SRS course. All staff using respiratory protection must be properly fit tested and medically cleared. All training must be documented and available for inspection by SRS.
Supervisor SOP Approval

By signing and dating here, the Supervisor certifies that this SOP for the ________________ use of respiratory protection is accurate and effectively provides standard operating procedures to be used by personnel.

______________________________________________________________________________

Signature     Printed Name/Title     Date

I have read and understand the content of this SOP:

<table>
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<tr>
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<th>Signature</th>
<th>Date</th>
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ATTACHMENT B - RESPIRATOR FIT TESTING PROCEDURES

The following document details how fit testing should be performed by SRS employees. SRS employees are only authorized to perform a qualitative fit test. As the qualitative fit test only provides an assigned protection factor of 10 only filter face pieces and half mask respirators shall be fit tested by SRS. All other respirator types should be qualitative fit tested by a 3rd party entity.

The fit-test will not be conducted on employees if they have any facial hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard, mustache or sideburns which cross the respirator sealing surface.

Prior to Fit-Test

1. Show employee how-to put-on respirator, how to position the respirator on their face, how to set the strap tension and how to determine an acceptable fit.
2. Inform the employee that he/she is being asked to select the respirator that provides the most acceptable fit. Employees should be instructed to let us know if the respirator fit is unacceptable.
3. Allow the employee wear the respirator for at least 5 minutes to assess comfort prior to fit-testing.
4. Assess the comfort of the respirator by reviewing the following with the employee:
   • Position of the mask on the nose
   • Room for eye protection
   • Room to talk
   • Position of mask on face and cheeks
5. Assess the fit of the respirator by observing the following:
   • Chin properly placed
   • Adequate strap tension, not overly tightened
   • Fit across nose bridge
   • Respirator proper size to span distance between nose to chin
   • Tendency of respirator to slip
6. Have employee “seat” the respirator on their face. This is done by moving the head from side to side and up and down slowly while taking a few slow deep breaths.
7. Have employee conduct a user seal check:

   **Positive Pressure Check.** Close off exhalation valve and exhale gently into the facepiece. Fit is acceptable if a slight positive pressure can be built up inside the facepiece without any evidence of outward leakage at the seal.

   **Negative Pressure Check.** Close off the inlet opening of the cartridges by covering with the palm of the hands (if hands cannot cover cartridges use latex or nitrile glove to cover), inhale gently so that the facepiece collapses slightly, Fit is acceptable if the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected.

8. Refer employee to EOHS if he/she experiences any difficulty in breathing during the test.
FIT-TESTING PROCEDURES

Qualitative-Bitrex

1. Conduct a sensitivity screening test using Bitrex Sensitivity Solution to determine if the person can taste it. This should be done with the fit testing hood over the employees head. The sensitivity solution should be a dilute fit testing solution that is nebulized onto the tongue of the person being testing. If they cannot detect Bitrex, saccharine solution will be used. If they can detect it, proceed with fit-test.

2. Instruct the employee don their respirator.

3. Have employee perform fit-checks.

4. Using a nebulizer, spray Bitrex or saccharine Fit Test Solution 3-5 times into the fit test hood. If the person detects the taste, stop the test and re-fit the respirator.

5. If the person does not detect the taste, proceed with the fit-test exercises. These will include:
   - Normal Breathing
   - Deep Breathing
   - Turning Head Side to Side
   - Moving Head Up and Down
   - Talking (Rainbow Passage)
   - Grimace (15 Seconds)
   - Bending over
   - Normal Breathing

   Each test will be conducted for 1 minute, excluding the grimace which will be performed for 15 seconds.

6. If the employee detects the Bitrex taste during the test, stop immediately and have them reposition and adjust their respirator.

7. If the employee does not detect the taste they have passed the fit-test.
ATTACHMENT C - RESPIRATOR SITE EVALUATION FORM

Evaluator: ___________________________ Date: __________________

Employee’s Department: __________________________________________

YES NO
( ) ( ) What procedure is the employee using the respirator for?
( ) ( ) Is the respirator appropriate?
( ) ( ) Are the cartridges/filters appropriate?
( ) ( ) Did employee complete fit checks prior to use? OR
( ) ( ) 1. Can employee demonstrate fit checks?
( ) ( ) Is the respirator clean and in good condition?
( ) ( ) Is the employee current for training and fit-testing?
( ) ( ) Can the employee identify the type of respirator they are using and what the limitations are?
( ) ( ) Can the employee identify the type of cartridge/filter they are using and what the limitations are?
( ) ( ) Does the employee maintain documentation of inspections and cleanings (Respirator Inspection, Cleaning and Maintenance Form)?
( ) ( ) Is the employee wearing a tight-fitting respirator with a beard?
ATTACHMENT D - INFORMATION FOR EMPLOYEES USING RESPIRATORS WHEN NOT REQUIRED

The follow information is from Appendix D to 29 CFR 1910.134 (Mandatory) Information for Employees Using Respirators When Not Required Under the Standard

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

You should do the following:

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

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

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

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