Respiratory Protection Program

1.0 Purpose

The objective of the University’s Respiratory Protection Program is to ensure that the respirators worn by faculty, staff and students provide adequate protection, are properly maintained and used, and that their use does not pose an unreasonable health hazard for the wearer.

2.0 Scope

This respiratory protection program covers:

- Selecting respirators for use in the work place;
- Medical evaluations of faculty, staff and students required to use respirators;
- Fit testing procedures for tight-fitting respirators;
- Procedures for proper use of respirators in routine and reasonably foreseeable emergency situations;
- Procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, discarding, and otherwise maintaining respirators;
- Training of faculty and staff in the respiratory hazards to which they are potentially exposed during routine and emergency situations;
- Training of faculty and staff in the proper use of respirators, including putting them on and removing them, and limitation on their use, and their maintenance; and
- Procedures for regularly evaluating the effectiveness of the program.

3.0 RESPONSIBILITY

The University will, when feasible, establish and maintain engineering control measures such as general and local ventilation, substitution of less toxic chemicals, or enclosure or confinement of the operation to reduce or mitigate the hazards or potential hazards to the health of faculty, staff and students from breathing harmful dusts, fogs, fumes, mists, gases, smokes, sprays or vapors.
Respiratory Protection Program

3.1 Department Heads – Deans, Directors, Assistant Directors

- Provide respirators, without charge, to faculty, staff and students that are applicable and suitable for the purpose intended, based upon an evaluation of the work environment.

- Allow faculty and staff to complete the Respiratory Medical Evaluation Questionnaire, exam and fit test during normal working hours or at a time convenient to the faculty and staff.

- Establish and maintain this Respiratory Program.

3.2 Supervisor and Chair

- Supervise the use of respirators by their faculty, staff and students and ensure that the respirators are used when they are required and in the manner in which the wearer was trained.

- Ensure that faculty, staff and students are allowed to leave the respirator use area to wash their face and respirator face pieces as necessary to prevent eye or skin irritation associated with respirator use.

- Ensure the faculty, staff and students leave the respirator use area if they detect vapor or gas breakthrough, changes in resistance, or leakage of the face piece.

- Ensure faculty, staff and students replace the respirator or filter, cartridge or canister elements as required.

3.3 Faculty and Staff

- Wear a respirator as required for routine and/or emergency use.

- Use the provided respirator in accordance with the instructions and training received.

- Guard against damage to the respirator.

- If the respirator malfunctions, immediately leave the contaminated area and report the malfunction to their Chair or Supervisor designated by the University or Program Administrator.

- Report to the Chair or Supervisor any charge in his/her medical status that may affect their ability to wear a respirator safely.
Respiratory Protection Program

- When respirator is worn intermittently, to keep it in a clean and in a sanitary location between each use.

- Ensure that the respirator is cleaned, maintained and stored as instructed.

3.4 Students

- Wear a respirator as required for those instructional tasks identified as requiring respirator usage.

- Use the provided respirator in accordance with the instructions and training received.

- Guard against damage to the respirator.

- If the respirator malfunctions, immediately leave the contaminated area and report the malfunction to the faculty person in charge.

- Report to the faculty person in charge any charge in his/her medical status that may affect their ability to wear a respirator safely.

- When respirator is worn intermittently, to keep it in a clean and sanitary location between each use.

- Ensure that the respirator is cleaned, maintained and stored as instructed.

3.5 Risk Management

- Measure, estimate, or review information on the concentration of an airborne contaminant in the work area prior to respirator selection and periodically during respirator use to ensure that the proper type of respirator is being used.

- Select the appropriate type or class of respirator that will provide adequate protection for each contaminant present.

- Identifying a physician or licensed health care professional to perform medical evaluations of all faculty and staff required to wear respirators.

- Making appointments and ensure medical evaluations and fit tests have been performed prior to the faculty, staff and students being assigned to a work area where respirator use is required.
Respiratory Protection Program

- Maintain fit test, training and medical approval forms for respirator use.
- Ensure supervisors that supervise program participants and program participants are trained in respiratory protection and the requirements of this program.
- Maintain records and written procedures in a matter that documents the respiratory program.
- Evaluate the Respiratory Protection Program’s effectiveness.

Note: Barbara Williams, Health and Safety Specialist, in Risk Management, is the University’s designated Program Administrator, phone 202-274-7178, e-mail brwilliams@udc.edu.

4.0 APPLICABLE FORMS & REFERENCE DOCUMENTS

- Hazard Evaluation and Respirator Selection Record
- Faculty and Staff Respirator Assignment and Training Record
- Respirator Inspection Record
- Respirator Fit Test Record
- OSHA 1910.134 Respiratory Protection
- OSHA Respirator Medical Evaluation Questionnaire: Appendix C to Sec. 1910.134 (Mandatory)
- Respiratory Protection Program Audit

5.0 Safety Precautions

- All steps outlined in this work instructions must be followed in order to ensure faculty, staff and student safety.

6.0 Procedure

6.1 Hazard Evaluation

- Respirators will be selected only after a determination has been made as to the actual or potential exposure of a faculty or staff person or student to harmful concentrations of contaminates in the work place (See Appendix A – Hazard Evaluation and Respirator Selection Record Form).
Respiratory Protection Program

- The determination is made under the direction of the Program Administrator and will be performed prior to commencing routine or non-routine tasks requiring respirator protection.

- Periodically thereafter, but not more than every 12 months, a review of the real and/or potential exposure is made to determine if respiratory protection continues to be required, and if so, if current respirators will provide adequate protection.

- Records of all hazard evaluations are on file with the Program Administrator.

6.2 Respirator Selection

- The University will provide respirators, free of charge, to all faculty and staff required to wear them.

- Only those respirators approved by the National Institute for Occupational Safety and Health (NIOSH) are purchased by the University and used by its faculty and staff. Students must also wear only NIOSH approved respirators. Non-approved respirators are not to be used by any faculty and staff, even where respirator use is voluntary.

- Respirators are selected on the basis of the respiratory hazard(s) to which faculty, staff and students are exposed, and workplace and user factors that affect respirator performance and reliability. A respirator will be selected following the identification and evaluation of respiratory hazards in the work place.

NOTE: The respirator selection criteria can be found in Appendix B of this program along with OSHA Substance Specific Standards.

6.3 Particulates

For faculty, staff and students exposed to airborne particulate above the available exposure limit, the University will provide air-purifying respirators equipped with a filter certified by NIOSH under 30 CFR Part 11 as a high efficiency particulate air filter.

6.4 Gases/Vapors

- Based on air sampling conducted, faculty and staff exposed to gases and vapors will be provided air-purifying respirators equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant in question.
Respiratory Protection Program

- Cartridges will be changed when indicated by the ESLI. In those instances where there is no ESLI appropriate for conditions in the workplace, the Program Administrator establish a cartridge change schedule for cartridges.

- The cartridge change program will be based on objective information to ensure that cartridges are changed before the end of their service life.

6.5 Issuing Respirators

Respirators are issued by the Program Administrator only to those faculty and staff that have passed their medical exam, been fit tested and received the Respirator Training.

6.6 Selected Respirators for faculty, staff and student Use.

Respirators, appropriate to the hazard, are used only in identified locations and/or job functions. Respirators selected for jobs/tasks will be recorded and records kept on the OEHS.

6.7 Medical Evaluation

Using a respirator may place a physiological burden on individuals that varies with the type of respirator worn, the conditions present where the work or task is being performed and the medical status of the individual.

- All faculty, staff and students required to wear respirators will be examined by a licensed physician or other licensed health care professional (PLHCP). The examination will include a medical evaluation using a medical questionnaire or an initial medical examination that obtains the same information as the medical questionnaire.

- The examination and/or medical questionnaire will be administered confidentially and during the faculty and staff’s normal working hours or at a time and place convenient for the faculty, staff or student. Each faculty, staff and student will have the opportunity to discuss the questionnaire and examination results with the PLHCP.

- As part of the examination process, the following information will be provided to the PLHCP by the Program Administrator prior to the PLHCP making a recommendation concerning a faculty, staff or student’s ability to use a respirator:
Respiratory Protection Program

- The type and weight of the respirator to be used by the faculty and staff.
- The duration and frequency of respirator use.
- The expected physical work effort.
- Additional protective clothing and equipment to be worn.
- Temperature and humidity extremes that may be encountered in the workplace.

- A follow-up medical examination will be provided to the faculty, staff or student who gives a positive response to any questions among questions 1 through 8 in section 2, Part A of the OSHA Respirator Medical Evaluation Questionnaire: Appendix C to Sec. 1910.134 (Mandatory).

- Additional medical evaluations will be provided to the faculty, staff or student if:
  - A faculty or staff person reports medical signs or symptoms that are related to the use of a respirator.
  - A health care professional, supervisor, or the respirator program administrator informs management that a faculty or staff needs to be reevaluated.
  - Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for faculty or staff reevaluation.
  - A change occurs in the workplace conditions that may result in a substantial increase in the physiological burden placed on a faculty and staff person.

6.6 Fit testing

- No faculty or staff is allowed to wear a respirator with a negative or positive pressure tight-fitting face piece until they have demonstrated that an acceptable fit can be obtained.

- Quantitative fit tests will be conducted using a TSI Portacount Plus machine and will be administered by a University selected certified and licensed environmental health and safety contractor.
Respiratory Protection Program

- Fit tests will be conducted using the respirator the faculty, staff or student has been issued with a sampling adaptor installed. PAPRs will be tested in the negative pressure mode.

- Fit tests will be conducted on an annual basis. Additional fit tests may be conducted based on the following:
  o Request by faculty, staff or student;
  o Issuance of a different style, size, make or model respirator; or
  o Observation of physical changes that may affect respirator fit, such as weight gain/loss, by the faculty person, staff member or student, Chair, Supervisor, physician or Program Administrator.

- Fit test records will be maintained on file in Risk Management.

Respiratory NOTE: Fit testing will not be given to a faculty member, staff person or student if there is any hair growth between the skin and the facepiece sealing surface, such as stubble, beard growth, beard, mustache or sideburns that cross the respirator sealing surface. Consequently, faculty or staff working in areas where tight-fitting respirators are required may not have facial hair that interferes with a respirator face seal.

6.7 Respirator Facepiece Positive and/or Negative Pressure Fit Checks

Faculty, staff and students who use a tight-fitting respirator are required to perform a user seal check to ensure that an adequate seal is achieved each time the respirator is put on.

User seal checks are not substitutes for qualitative or quantitative fit tests.

6.7.1 Positive pressure check procedure

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

6.7.2 **Negative pressure check procedure**

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

6.7.3 **Manufacturer's Recommended User Seal Check Procedures**

The respirator manufacturer's recommended procedures for performing a user seal check may be used instead of the positive and/or negative pressure check procedures provided that the employer demonstrates that the manufacturer's procedures are equally effective.

Faculty and staff who wear corrective glasses, goggles, or other personal protective equipment shall wear such equipment in a manner that does not interfere with the seal of the face piece to the face of the user.

6.8 **Maintenance and Care of Respirators**

- Faculty, staff and students covered by this program will be provided with a respirator that is clean, sanitary and in good working order.

- Each individual issued a respirator will be responsible for cleaning and disinfecting their respirator according to the cleaning schedule issued by the OEHS.

- Respirators maintained for emergency use will be cleaned and disinfected after each use.

**Steps for cleaning respirators:**

- Remove filters, cartridges, or canisters. Disassemble facepieces by removing speaking diaphragms, demand and pressure - demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
Respiratory Protection Program

- Using a cleanser and disinfectant approved by the respirator manufacturer wipe down respirator components.

- Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.

- Components should be hand-dried with a clean lint-free cloth or air dried.

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

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

6.9 Respirator Storage

- At the end of the workday, all respirators must be stored in a designated storage area where the respirators can be kept clean, dry and undamaged.

- Respirators used intermittently are to be returned to their plastic bag and stored in a designated clean, dry area where they will remain undamaged or become contaminated.

6.10 Respirator Inspection

- The Program Administrator will inspect all respirators maintained for use in emergency situation at least monthly and in accordance with the manufacturer’s recommendations and will be checked for proper function before and after each use. Inspections will be logged on the Respirator Inspection Record Form.

- Prior to donning a respirator, the respirator wearer must inspect the device for defects according to the training received.

- No respirator is permitted to be worn with a known defect. If a respirator is found to be defective during inspection, the respirator is to be returned to the Program Administrator.

6.11 Respirator Maintenance/Repair
No repairs will be made to respirators, but damaged respirators will be disposed of and the respirator replaced.

**Respiratory Protection Program**

### 6.12 Identification of Filters, Cartridges and Canisters

- Only color-coded filters, cartridges and canisters with the NIOSH approval label will be purchased and used.
- NIOSH approval labels are not to be removed and must remain legible.

### 6.13 Training Information

- Faculty and staff required to use respirators will be instructed and trained in the selection, use, care, and maintenance of respiratory devices.
- Respiratory protection training will be conducted in a classroom setting and be coordinated by the Program Administrator working in conjunction with an appropriately certified and licensed environmental health and safety contractor.
- Training will provide each user an opportunity to handle the respirator, to have it fitted properly, to test its face piece-to-face seal and to wear it in normal air for a familiarization period, and to wear it in a test atmosphere.
- Retraining will be performed as needed, or at least annually, to ensure an effective program. The training program will emphasize at least the following:
  - Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator.
  - What limitations and capabilities of the respirators 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.
Respiratory Protection Program

6.14 Program Evaluation

The Program Administrator will evaluate the workplace as necessary to ensure that the provisions of this respiratory protection program are being effectively implemented, and that it continues to be effective. The Program Administrator will review the written program annually and revise as necessary. Audit results will be recorded on the Respiratory Protection Program Audit Form.

Factors that will be assessed include, but are not limited to:

- Respirator fit including the ability of employees to use respirators without interfering with effective workplace performance;
- Appropriate respirator selection for the hazard to which the employee is exposed;
- Proper respirator use under the work place condition the employee encounter; and
- Proper respirator maintenance.

Copies of the written evaluations and responses are maintained by the Program Administrator.

6.15 Record Keeping

- Records are maintained and are available to employees upon request for all medical examinations, fit testing, air sampling surveys and training sessions.
- Faculty and staff requests for records should be directed to Program Administrator.

6.16 Non-Mandatory faculty and staff use of respirators (Appendix D to Section 1910.134)

The University encourages faculty, staff and students to use disposable respirators while performing tasks known to produce particulate and dust even when exposures are below the exposure limit. When voluntarily using disposable respirators:
• Take precautions to be sure that the respirator itself does not present a hazard.

**Respiratory Protection Program**

• Read and heed all instructions provided by the manufacture on use, maintenance, cleaning and care and warnings regarding the respirations limitations.

• Consult with the Respiratory Program Administrator before choosing a respirator.

• Use only NIOSH certified respirators.

• Know what the respirator is designed for and how much it will protect you.

• Do not wear the respirator into an atmosphere containing contaminates for which the respirator is not designed to protect against.

• Do not share respirators.

**6.17 Additional Information**

Further information on the written program and the OSHA Respiratory Protection Standard is available in Risk Management

**7.0 Preventive Maintenance**

See section 6.8

**8.0 Quality Records and Retention Times**

• Hazard Evaluation and Respirator Selection Record – 7 year retention time

• Faculty and staff Respiration Assignment and Training Record - 7 year retention time

• Respirator Inspection Record – 1 year retention time

• Respirator Fit Test Records – 30 year retention time

• Respiratory Protection Program Audit – 7 year retention
Appendix A
# Hazard Evaluation and Respirator Selection Record
(See guidelines on Reserve Side)

## Job/Task Information

<table>
<thead>
<tr>
<th>Facility Name and Location</th>
<th>______________________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation Date</td>
<td>______________________________</td>
</tr>
<tr>
<td>Prepared by</td>
<td>______________________________</td>
</tr>
<tr>
<td>Department</td>
<td>______________________________</td>
</tr>
<tr>
<td>Job Title</td>
<td>______________________________</td>
</tr>
<tr>
<td>Activity</td>
<td>______________________________</td>
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</table>

## Exposure Information

<table>
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<tr>
<th>Chemical Substance</th>
<th>FORM</th>
<th>HAZARD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TLV/PEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exposure</td>
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<tr>
<td></td>
<td>Particulate</td>
<td>Gas</td>
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</tbody>
</table>

- **Oxygen Deficiency Hazard?**  
  - Yes  
  - No

- **Chemicals with Poor Warning Properties?**  
  - Yes  
  - No

## Respirator Selection

- **Check if selection is based on OSHA Substance-Specific Standards**
  - Type  
  - Face Piece/Hood  
  - Filter  
  - Air Supply  
  - NIOSH Approval No.  
  - ESLI (N/Y)

## Emergency Use Information

- **Possible IDLH Exposure?**  
  - Yes  
  - No

- **SCBA or Airline with Escape Provision Required?**  
  - Yes  
  - No

- **Location of SCBA**  
  1. ______________________________  
  2. ______________________________
GUIDELINES FOR THE HAZARD EVALUATION AND RESPIRATOR SELECTION RECORD

**Use** The Hazard Evaluation and Respirator Selection Record is used to document the information that went into the selection of a particulate type of respirator for a particular work area or job. A separate record is completed for each work area or job where the respiratory hazards are sufficiently different so as to result in the selection of different types of respirators. This information serves as the basis for assigning respirators to individual employees.

**a. JOB/TASK INFORMATION**- Enter the facility name and location, the date of the hazard evaluation and individual preparing the evaluation, the applicable department and job, and a description of the activity that results in airborne emissions or the presence of hazardous substances.

**b. EXPOSURE INFORMATION**- List the chemical substances or groups of substances (e.g. organic solvents, welding fumes) and enter a checkmark under the appropriate form of airborne contaminant, particle (e.g., fumes, dust, mists), gas or vapor.

In the hazard section, enter the ACGIH Threshold Limit Value (TLV) or OSHA Permissible Exposure Limit (PEL), whichever is more applicable to this respirator selection. If applicable, (e.g., for confined space entry, emergency response) enter the Immediately Dangerous to Life and Health (IDLH) concentration. Under Exposure, enter an estimate of employee exposure for this job or the results of industrial hygiene sampling for the job. Enter a checkmark if the chemical substance is an eye irritant under the conditions of use.

**c. RESPIRATOR SELECTION**- Check the box if an OSHA Substance-Specific Standard must be used to determine the proper respirator. Use the appropriate standard for selecting a respirator. Enter the type of respirator selected for the job (e.g., air purifying, supplied air), and the face piece type (e.g., half-musk, full face piece, hood). For air-purifying respirators, enter the type of filter being used. For supplied air respirators, enter the location and type of air supply. Enter the NIOSH approval number and indicate if an End of Service Life Indicator (ESLI) is part of the respirator.

**d. EMERGENCY USE INFORMATION**- Enter the applicable information for respirators being selected for use in emergency situations.
APPENDIX B
1.1 Selection Criteria

When selecting the appropriate respirator for use by the faculty and staff, the Program Administrator must evaluate various factors. These factors include:

- Airborne contamination: The specific airborne contaminant(s) to which workers are exposed and the airborne concentrations measured, or expected, in the work area. The presence of oil in the aerosol is critical when selecting particulate respirators.

- Workers activity and location: Is the employee in the hazardous area continuously or intermittently during the work shift? Is the work rate right, medium, or heavy?

- Respirator use conditions: The period of time that a respirator must be worn is an important factor that should be taken into account when selecting a respirator. Consideration will be given to the type of respirator application, (e.g., routine, nonroutine, emergency or rescue use).

- Location of the potential hazardous area: The location of the hazardous area with respect to a safe area having respirable air should be considered. This will permit planning for the escape of workers if an emergency occurs, for the entry of workers to perform maintenance duties, and for rescue operations.

- Respirator characteristics, capabilities, and limitations: The physical characteristics, functional capabilities, and the performance limitations of the various types should be considered.

- Operational limitations: Environmental conditions and the level of effort required of the respirator wearer might affect service life. (For example, extreme physical exertion can cause the user to deplete the air supply in a SCBA (Self-Contained Breathing Apparatus) such that service life is reduced by half or more.

2.1 Hazard Determination

Prior to selecting and issuing a respirator, a determination of the nature of the chemical hazard must be made. This information is critical in ensuring that the proper type of respirator is selected. The steps in Hazard Determination include:
• Determine what contaminant(s) may be present in the workplace. This information can be obtained by reviewing the Material Safety Data Sheet (MSDS);

• Determine whether there is a published Threshold Limit Value (TLV), Permissible Exposure Limit (PEL), or any other available exposure limit or estimate of toxicity for the contaminant(s). Determine if the IDHL (Immediately Dangerous to Life and Health) concentration for the contaminant is available;

• Determine if there is an OSHA substance specific standard (e.g., lead, formaldehyde, asbestos) for the contaminant(s). If so, there may be specific respirators required that will influence the selection process;

• If the potential for an oxygen-deficient environment exists, measure the oxygen content;

• Measure the concentration of contaminant(s);

• Determine the physical state of the contaminant (gas, vapor or aerosol). If an aerosol (liquid or solid particles), determine or estimate the particle size. Determine if vapor pressure of the aerosol is significant at the maximum, expected temperature of the work environment;

• Determine whether the contaminant(s) present can be absorbed through the skin, produce skin sensitization, or be irritating or corrosive to the eyes and skin; and,

• Determine for a gas or vapor contaminant(s) if a known odor, taste, or irritation threshold concentration exists.

### 3.1 Selection of Respirator for Routine Use

The following selection steps are adapted from the American National Standard for Respiratory Protection (ANSI Z88.2-1992) and the OSHA Respiratory Protection Standard. The selection steps are also represented as a Flowchart in Figure 1.

• If unable to determine what potentially hazardous contaminant may be present, the atmosphere should be considered IDHL. Refer to the respirator selection guidelines for atmospheres immediately dangerous to life and health;

• If no exposure limit or guideline is available, and estimates of the toxicity cannot be made, the atmosphere should be considered IDHL. Refer to the respirator selection guidelines for atmospheres immediately dangerous to life and health;
If the measured or estimated concentration of contaminant(s) is considered IDHL refer to the respirator selection guidelines for atmospheres immediately dangerous to life and health;

If a specific OSHA standard exists for the contaminant, follow those guidelines/requirements (e.g. lead, asbestos, formaldehyde). Refer to Appendix B.

If there is an oxygen–deficient atmosphere, the type of respirator selected depends on the partial pressure and concentration of oxygen and the concentration of the other contaminant(s) that may be present. Refer to the respirator selection guidelines for reduced-pressure atmospheres;

Divide measured or estimated concentration of each contaminant by the exposure limit or guideline to obtain a Hazard Ratio (HR).

When two or more substances are present, consideration needs to be given if there is a synergistic or combined effect of exposure rather than considering each substance individually. Select a respirator with an Assigned Protection Factor (APF) greater than the value of the Hazard Ratio by using Figure 1.

Example: An employee is exposed to Toluene vapors at an average concentration of 200 ppm. The ACGIH TLV for Toluene is 50 ppm. The hazard Ratio = 4. The minimum respirator selected must be a half-mask air-purifying respirator, equipped with the appropriated cartridge (APF=10).

If the contaminant(s) is a gas or vapor only, select a device with an assigned protection factor that is greater than the hazard ratio. The concentration should also be less than the maximum use concentration of the cartridge/canister.

If the contaminant is a paint, lacquer, enamel, or pesticide, select a combination respirator consisting of an organic vapor cartridge and a particulate filter (based on the presence of oil aerosols) or an atmosphere-supplying respirator;

If the contaminant is an aerosol (particulate) with an unknown particle size, or if it is known to be less than 2 µm, a high-efficiency filter (or N100, R100, P100 filter) should be used;

If the contaminant is a gas or vapor and has poor warning properties (meaning that a hazardous concentration does not trigger a sensation of smell or irritation), the use of an atmosphere-supplying respirator is generally recommended. When atmosphere-supplying respirators cannot be used because of the lack of a feasible air supply or because of the need for worker mobility, air-purifying devise should by used only if:

o The air-purifying respirator has reliable end-of-service-life indicator that will warn the use prior to contaminant breakthrough or,
o A cartridge change schedule is implemented based on cartridge services data including desorption studies (unless cartridges are changed daily), expected concentration, pattern of use, and duration of exposure have been established, and the chemical does not have a ceiling limit.

The hazard evaluation and respirator selection process will be documented for each job or task where respirators are provided or required. Form HS0001 Hazard Evaluation and Respirator Selection Record (Appendix B).

FIGURE 2
RESPIRATOR SELECTION FLOWCHART
FIGURE 2 (cont.)

<table>
<thead>
<tr>
<th>Can potentially hazardous air contaminant be identified?</th>
<th>No</th>
<th>Treat as an IDLH Situation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there an exposure limit and can estimates of toxicity be made?</td>
<td>No</td>
<td>Treat as an IDLH Situation.</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a specific standard for the air contaminant (e.g., lead, asbestos, formaldehyde)?</td>
<td>Yes</td>
<td>Follow applicable standard.</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there an oxygen deficient atmosphere?</td>
<td>Yes</td>
<td>Follow selection criteria for reduced atmospheric pressure or oxygen deficiency.</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is measured concentration of contaminants considered IDLH?</td>
<td>Yes</td>
<td>Treat as an IDLH Situation.</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Calculate the Hazard Ratio:

\[
HR = \frac{\text{Measured or Estimate Concentration}}{\text{Exposed Limit}}
\]

Continued
Air purifying respirators should only be used if: (1) the air-purifying respirator has a reliable end-of service-life indicator that will warn the user prior to contaminant breakthrough, or (2) a cartridge change schedule is implemented based on cartridge service data including desorption studies (unless cartridge are changed daily), expected concentration, pattern of use, and duration of exposure have been established, and the chemical does not have a ceiling limit.

FIGURE 2 (cont.)
Air purifying respirators should only be used if: (1) the air-purifying respirator has a reliable end-of-service-life indicator that will warn the user prior to contaminant breakthrough, or (2) a cartridge change schedule is implemented based on cartridge service data including desorption studies (unless cartridge are changed daily), expected concentration, pattern of use, and duration of exposure have been established, and the chemical does not have a ceiling limit.
Select a respirator with an Assigned Protection Factor greater than the Hazard Ratio.

Was an air-supplied respirator selected?

Yes  END

No

Is the contaminant a gas or vapor only?

Yes  Does the contaminant have poor warning properties?

No  Select a device with a Protective Factor > Hazard Ratio.

No

Is the contaminant a paint, lacquer, enamel or pesticide?

Yes  Is the work setting free of air aerosols?

No  Respirators not required under OSHA standard (voluntary use). Voluntary respirator use must follow all guidelines located in 29 CFR 1910.134 App. D.

No

Will the filter be used for more than 8 hours?

Yes  Select a combination respirator consisting of an organic vapor cartridge and a P95 particulate filter with an optional prefilter (Minimally protective)

No  Select a combination respirator consisting of an organic vapor cartridge and a R95 or P95 particulate filter with an optional prefilter (Minimally protective)
OSHA Substance-Specific Standards

Below is a listing of OSHA ‘Substance-Specific’ Standards. Each standard addresses one chemical substance or family of substances. Most of these contain specific requirements for respirator selection.

If you are requiring employees to wear respirators because of overexposure to one of the chemicals covered by this standard, then you must select a respirator based on the ‘respiratory protection’ section of the corresponding standard.

When the Respiratory Protection standard was published on 1/8/98., OSHA also eliminated many of the redundant respiratory protection requirements from these substance-specific standards.

<table>
<thead>
<tr>
<th>General Industry</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1910.1001 Asbestos</td>
<td>1926.60 Methyleneedianiline</td>
</tr>
<tr>
<td>1910.1003 13 Carcinogens (4-Nitrophenyl, etc.)</td>
<td>1926.62 Lead</td>
</tr>
<tr>
<td>1910.1004 alpha-Naphthylamine†</td>
<td>1926.1101 Asbestos</td>
</tr>
<tr>
<td>1910.1006 Methyl chloromethyl ether†</td>
<td>1926.1103 13 Carcinogens (4-Nitrophenyl, etc.)</td>
</tr>
<tr>
<td>1910.1007 3,3’- Dichlorobenzidine (and its salts)†</td>
<td>1926.1104 alpha-Naphthylamine†</td>
</tr>
<tr>
<td>1910.1008 bis-Chloromethyl ether†</td>
<td>1926.1106 Methyl chloromethyl ether†</td>
</tr>
<tr>
<td>1910.1009 beta-Naphthylamine†</td>
<td>1926.1107 3,3’-Dichlorobenzidine (and its salts)†</td>
</tr>
<tr>
<td>1910.1010 Benzidine†</td>
<td>1926.1110 Benzidine†</td>
</tr>
<tr>
<td>1910.1011 4-Aminodiphenyl†</td>
<td>1926.1119 beta-Naphthylamine†</td>
</tr>
<tr>
<td>1910.1012 Ethylenimine†</td>
<td>1926.1110 Benzidine†</td>
</tr>
<tr>
<td>1910.1013 beta-Propiolactone†</td>
<td>1926.1111 4-Aminodiphenyl†</td>
</tr>
<tr>
<td>1910.1014 2-Acetylaminofluorene†</td>
<td>1926.1112 Ethylenimine†</td>
</tr>
<tr>
<td>1910.1015 4-Dimethylaminoazobenzene†</td>
<td>1926.1113 beta-Propiolactone†</td>
</tr>
<tr>
<td>1910.1016 N-Nitrosodimethylamine†</td>
<td>1926.1114 2-Acetylaminofluorene†</td>
</tr>
<tr>
<td>1910.1017 Vinyl chloride</td>
<td>1926.1115 4-Dimethylaminoazobenzene†</td>
</tr>
<tr>
<td>1910.1018 Inorganic arsenic</td>
<td>1926.1116 N-Nitrosodimethylamine</td>
</tr>
<tr>
<td>1910.1025 Lead</td>
<td>1926.1117 Vinyl chloride</td>
</tr>
<tr>
<td>1910.1027 Cadmium</td>
<td>1926.1118 Inorganic arsenic</td>
</tr>
<tr>
<td>1910.1028 Benzene</td>
<td>1926.1127 Cadmium</td>
</tr>
<tr>
<td>1910.1029 Coke oven emissions</td>
<td>1926.1128 Benzene</td>
</tr>
<tr>
<td>1910.1030 Bloodborne pathogens</td>
<td>1926.1129 Coke oven emissions</td>
</tr>
<tr>
<td>1910.1043 Cotton dust</td>
<td>1926.1144 1,2-dibromo-3-chloropropane</td>
</tr>
<tr>
<td>1910.1044 1,2-dibromo-3-chloropropane</td>
<td>1926.1145 Acrylonitrile</td>
</tr>
<tr>
<td>1910.1045 Acrylonitrile</td>
<td>1926.1147 Ethylene oxide</td>
</tr>
<tr>
<td>1910.1047 Ethylene oxide</td>
<td>1926.1148 Formaldehyde</td>
</tr>
<tr>
<td>1910.1048 Formaldehyde</td>
<td>1926.1152 Methylene Chloride</td>
</tr>
<tr>
<td>1910.1050 Methyleneedianiline</td>
<td></td>
</tr>
<tr>
<td>1910.1051 1,3-Butadiene</td>
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<tr>
<td>1910.1052 Methylene Chloride</td>
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</tbody>
</table>
APPENDIX C
Faculty and Staff Respirator Assignment and Training Record

Date: ____________________

Faculty, Staff, and Student Data

NAME: ____________________  SSN: ____________________
DEPARTMENT: ____________________  JOB: ____________________
EXPOSURE DURATION & FREQUENCY: ____________________

RESPIRATOR DATA

<table>
<thead>
<tr>
<th>TYPE</th>
<th>FILTER* ELEMENT</th>
<th>MANUFACTURER</th>
<th>FACE PIECE &amp; SIZE</th>
<th>DATE ASSIGNED</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

*For Gas/Vapor Air-Purifying Respirators: Frequency of Filter/Cartridge/Disposable Respirator Change

- Hourly  - 2x’s/8 hrs  - Daily  - Weekly  - After Each Use

Respirator Wearer Training Record

<table>
<thead>
<tr>
<th>Training Date</th>
<th>Training Provided By</th>
<th>Wearer’s Name (Print)</th>
<th>Wearer’s Signature</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>
Guidelines for the Respirator Assignment and Training Record

**Use:** The Faculty and Staff Respirator Assignment and Training Record is used to document the assignment of respirators and the training of respirator users, as recommended in ANSI Z88.2 and required in OSHA Regulations. An individual can be assigned up to two respirators. To meet the annual training requirements in OSHA Regulations and ANSI Z88.2, retraining is completed each year.

**a. Faculty, Staff, and Student Data.** Enter the name, SSN, department and job description. The job description should correspond to the job for which the assigned respirator(s) was approved.

**b. Respirator Data.** For one or two respirators, enter the following:

- **APR** – Air Purifying Respirator
- **PAPR** – Powered Air-Purifying Respirator
- **SAR** – Supplied Air Respirator
- **SCBA** – Self Contained Breathing Apparatus

Filter Element – For air purifying respirators, enter the contaminant(s) that the respirator is approved for. Also, indicate the frequency of filter/cartridge replacement or, for disposable respirators, respirator replacement.

Manufacturer and Model

Face piece & Size – Enter the face piece type and size

Date assigned – Enter the date the respirator was first assigned.

**c. Respirator Wearer Training Record** – For the corresponding respirators assigned, enter the training date, the name of the individual(s) providing the training and a signature of the respirator wearer for the three subject areas.
<table>
<thead>
<tr>
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<th>Respiratory Protection Program</th>
</tr>
</thead>
<tbody>
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<tr>
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</tr>
<tr>
<td>Approved by</td>
<td>Barbara Williams</td>
</tr>
<tr>
<td>Title</td>
<td>Health and Safety Specialist</td>
</tr>
</tbody>
</table>

APPENDIX D
Procedure for Positive and Negative Facefit Checks

1.0 Positive Pressure Facefit Check

1.1 Place the palm of the hand over the exhalation valve cover and exhale gently.

1.2 If the face piece bulges slightly, and no air leaks between the face and the face piece are detected, a proper fit has been obtained.

1.3 If air leakage is detected, reposition the respirator on the face and/or readjust the tension of the elastic straps to eliminate leakage.

Note: If you cannot achieve a proper fit, do not enter the contaminated area.

2.0 Negative Pressure Facefit Check

2.1 Place palms of the hands over the top of the cartridge or filter.

2.2 If the face piece collapses slightly, a proper fit has been obtained.

2.3 If air leakage is detected, reposition the respirator on the face and/or readjust the tension of the elastic straps to eliminate leakage.

Note: If you cannot achieve a proper fit, do not enter the contaminated area.
<table>
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<tr>
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<td>Title</td>
<td>Health and Safety Specialist</td>
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APPENDIX E
<table>
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<th>Subject</th>
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</tbody>
</table>

**RESPIRATOR INSPECTION RECORD**

Type: __________________________  I.D. Number: __________________

Directions: Identify any defects found, otherwise, mark “OK”.

A. Yoke and Head Harness  ________________________________

B. Inhalation Valves  ________________________________

C. Cartridge/Filter Connector  ________________________________

D. Inhalation Valve  ________________________________

E. Exhalation Valve  ________________________________

Other Defects:
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

Name: _____________________________  Date: _____________________________
APPENDIX F
Respiratory Protection Program Audit

Date: _______________________
Auditor(s): _______________________

1.0 Evaluation of the Written Program

1.1 Has a written respiratory protection program that includes work site-specific procedures on the use of respirators been established? Yes No

Comment: _______________________________________

1.2 Has a program administrator, with appropriate training and experience, been designated and identified in the written program?

Comment: _______________________________________

1.3 Where respirator use is required, does the written program include discussion or explanation of how:

a. Respirators are selected for the particular hazard(s) to which faculty and staff are exposed, including evaluation of workplace exposures?

Comment: _______________________________________

b. Medical evaluations are performed for faculty and staff required to use respirators?

Comment: _______________________________________

c. Fit testing is done for tight-fitting respirators?

Comment: _______________________________________

d. Respirators are used in routine and emergency situations?

Comment: _______________________________________
Subject: Respiratory Protection Program

<table>
<thead>
<tr>
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</tbody>
</table>

e. Respirators are cleaned, disinfected on a regular basis, stored, inspected, discarded and maintained?

Comment: ____________________________________________________ ___ ___

f. Adequate air quality, quantity and flow are ensured for atmosphere-supplying respirators?

Comment: ____________________________________________________ ___ ___

g. Employees are trained in the proper use of respirators, including putting on and taking off any limitations, and maintenance?

Comment: ____________________________________________________ ___ ___

h. Program effectiveness is regularly evaluated?

Comment: ____________________________________________________ ___ ___

1.1 Where air-purifying respirators are used, does the written program describe the information relied upon and the basis for the canister and cartridge change schedule, and the basis for reliance on the data?

Comment: ____________________________________________________ ___ ___

1.5 Where respirator use is voluntary:

a. Has a determination been made that the use of respirators does not create a hazard?

Comment: ____________________________________________________ ___ ___

b. Have users been provided with a copy if the contents of 29 CFR 1910.134 Appendix D?

Comment: ____________________________________________________ ___ ___

c. Except for the voluntary use if dust masks, are employees given sufficient medical evaluations and training on respirator use, care and maintenance, to prevent the respirator from creating a health hazard?

Comment: ____________________________________________________ ___ ___
2.0 Respirator Selection

The written program should describe, among other things, how respirators are selected. At this point in the audit, the auditor should check that the respirators assigned to employees have been properly selected for the job(s) being performed. Review of the most current information that describes the nature of the respiratory hazard (e.g. industrial hygiene monitoring results) for each job or task where respirators have been assigned. (Exposure monitoring results are not expected for escape or rescue respirators)

2.1 Has faculty and staff exposure monitoring been completed or have other reasonable estimate of faculty and staff exposure to respiratory hazard been evaluated?

Comment: ________________________________________  __  __

2.2 Have the respirators used for protection from chemicals with OSHA substance specific standards been specified according to the respirator selection table in those standards?

Comment: ________________________________________  __  __

2.3 Have respirators been selected according to the guidelines of the American National Standard Practices for Respiratory Protection (ANSI Z88.2) or NIOSH Respiratory Decision Logic?

Comment: ________________________________________  __  __

2.4 Is the following criteria also considered in the selection of respirators:

a. The existence or potential for oxygen-deficient or IDLH atmospheres?

Comment: ________________________________________  __  __

b. The assigned protection factor for a respirator compared to the exposures for a particular job?

Comment: ________________________________________  __  __

c. The potential for eye irritation?

Comment: ________________________________________  __  __
Subject: Respiratory Protection Program  

<table>
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</table>

d. Warning properties of the air borne chemical contaminant(s)?

Comment: ____________________________________________________  __ __

e. Use in emergency escape, rescue, or fighting?

Comment: ____________________________________________________  __ __

f. Any other selection criteria in your written program?

Comment: ____________________________________________________  __ __

2.5 Are only NIOSH-certificate respirators selected and used in accordance with their certification?

Comment: ____________________________________________________  __ __

2.6 Are respirators selected from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits the user?

Comment: ____________________________________________________  __ __

2.7 For IDLH atmospheres are the following respirators provided:

   a. A full face piece pressure demand SCBA certified by NIOSH for a minimum service life of 30 minutes? Or

Comment: ____________________________________________________  __ __

   b. A combination full face piece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply?

Comment: ____________________________________________________  __ __

2.8 For non IDLH atmospheres:

   a. Are the selected respirators adequate to protect the health of the employee under routine and reasonable foreseeable emergencies?

Comment: ____________________________________________________  __ __

   b. Are the selected respirators appropriate for the chemical state and the physical form of the contaminates?
Comment: ____________________________________     ___  ___

c. Are particulate respirators either “HEPA” certified by NIOSH under 30 CFR Part 11, or any filter certified by NIOSH under 42 CFR Part 84?

Comment: ____________________________________     ___  ___

d. Are gas and vapor purifying respirators equipped with an end-of-service life indicator (ESLI) certified by NIOSH for the contaminant?

Comment: ____________________________________     ___  ___

e. If there is no ESLI appropriate for the gas or vapor in the workplace, have a change schedule for canisters and cartridges been implemented?

Comment: ____________________________________     ___  ___

Based on the results of the audit walk-through and records review:

2.9 Has the correct respirator been specified for each job or task requiring one?

Comment: ____________________________________     ___  ___

2.10 Has the individual responsible for specifying respirators been adequately instructed on issuing the correct type?

Comment: ____________________________________     ___  ___

3.0 Medical Evaluations

3.1 Are medical evaluations provided to determine the faculty and staff ability to use a respirator before they are fit tested or required to use the respirator in the workplace?

Comment: ____________________________________     ___  ___

3.2 Is a physician or other licensed health care professional (PLHCP) being used to perform medical evaluations using a medical questionnaire (from 1910.134 Appendix C) or an initial medical
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</tbody>
</table>

examination that obtains the same information as the questionnaire?

Comment: ________________________________

3.3 Are the medical examinations and/or medical questionnaires administered confidentially during normal working hours, or at a time and place convenient to the faculty and staff?

Comment: ________________________________

3.4 Are the faculty and staff given an opportunity to discuss the questionnaire and examination results with the PLHCP?

Comment: ________________________________

3.5 Is the following information provided to the PLHCP before they make a recommendation concerning the employee’s ability to use a respirator:

a. The type and weight of the respirator to be used by the faculty and staff?

Comment: ________________________________

b. The duration and frequency of respirator use?

Comment: ________________________________

c. The expected physical work effort?

Comment: ________________________________

d. Additional protective clothing and equipped to be worn?

Comment: ________________________________

e. Temperature and humidity extremes that may be encountered?

Comment: ________________________________

3.6 Are follow-up medical exams provided for any employee when indicated from the initial medical examinations?

Comment: ________________________________

3.7 Has a written recommendation from the PLHCP been obtained for each
faculty and staff required to wear a respirator?

Comment: ___________________________________________ ___ ___

3.8 Are additional medical evaluations provided if:

a. An employee reports signs or symptoms related to their ability to wear a respirator?

Comment: ___________________________________________ ___ ___

b. A PLHCP, supervisor or program administrator informs employer of the need for reevaluation?

Comment: ___________________________________________ ___ ___

c. Observations from the program audit indicate a need for reevaluations?

Comment: ___________________________________________ ___ ___

d. Changes in the work place (e.g., physical work effort, protective clothing, temperature) that may substantially increase the physiological burden on an employee?

Comment: ___________________________________________ ___ ___

4.0 Respirator Fit Testing

4.1 Are fit tests performed upon initial respirator assignment and at least annually thereafter?

Comment: ___________________________________________ ___ ___

4.2 Are employees given a choice of different manufacturer’s models and sizes to select from?

Comment: ___________________________________________ ___ ___

4.3 Are written records of fit test results maintained?

Comment: ___________________________________________ ___ ___

4.4 Are additional fit tests conducted when the employee, PLHCP,
Supervisor or Program Administrator notice changes in an employee’s physical characteristics that could affect respirator fit (e.g., substantial weight loss, facial scarring, dental changes)?

Comment: ____________________________________________________________

For Qualitative Tests:

4.5 Are OSHA accepted fit test protocols from 1910.134 Appendix A used (i.e., isoamyl acetate, irritant smoke, saccharin mist, or denatonium benzoate)?

Comment: ____________________________________________________________

4.6 Do the fit test procedures include a set of test exercises?

Comment: ____________________________________________________________

4.7 Are positive and negative pressure fit checks conducted prior to the fit test?

Comment: ____________________________________________________________

4.8 Are tests limited to respirators that must achieve a fit factor of 100 or less (i.e., Assigned Protection Factor of 10 or less)?

Comment: ____________________________________________________________

4.9 Are air-supplied and powered air-purifying respirators converted to negative pressure respirators before fit testing, or as a surrogate respirator used for the fit test? (A respirator with the same face piece sealing surface, typically of the same manufacture and size)

Comment: ____________________________________________________________

For Quantitative Tests:

4.10 Do trained personnel operate the testing equipment?

Comment: ____________________________________________________________

4.11 Is the testing equipment calibrated, maintained, and operated in accordance with the manufacturer's instructions?
4.12 Do the fit test procedures include a set of test exercises?

Comment: ____________________________________________  __  __

4.13 Are written calibration records maintained?

Comment: ____________________________________________  __  __

4.14 Are air supplied respirators and powered air purifying respirators properly modified prior to the test, or as a probed surrogate (a respirator with the same face piece sealing surface, typically of the same manufacturer and size) face piece used?

Comment: ____________________________________________  __  __

5.0 Respirator Use

5.1 Are employees with facial hair or other conditions that will interfere with the seal between the respirator and face or the respirator valve prohibited from wearing respirators with tight-fitting face pieces?

Comment: ____________________________________________  __  __

5.2 Are provisions made for people who wear corrective lenses with a full face piece respirator?

Comment: ____________________________________________  __  __

5.3 When respirators are individually assigned, are they durably marked to identify the user?

Comment: ____________________________________________  __  __

5.4 Is a record maintained showing the date the respirator was issued to the employee?

Comment: ____________________________________________  __  __

5.5 Do employees perform user seal checks each time they put on a tight-fitting respirator?

Comment: ____________________________________________  __  __
5.6 Is appropriate surveillance of the work area conditions and exposures conducted to ensure that the current respirators are effective?

Comment: ____________________________________________  ___  ___

5.7 Are employees instructed to leave the respirator work area:

a. To wash their face and respirator, as needed, to prevent eye and skin irritation from the respirator?

Comment: ____________________________________________  ___  ___

b. When they detect gas or vapor breakthrough, changes in breathing resistance or face piece leakage?

Comment: ____________________________________________  ___  ___

c. To replace the filter, canister, or cartridge?

Comment: ____________________________________________  ___  ___

5.8 For respirator used in IDLH atmospheres:

a. Are steps taken to ensure that there is at least one additional person present when someone wearing a respirator is in a IDLH atmosphere?

Comment: ____________________________________________  ___  ___

b. Is communication (visual, voice, or signal line) maintained between all individuals present in the IDLH atmosphere?

Comment: ____________________________________________  ___  ___

5.9 Are the employee located outside the IDLH atmosphere equipped with:

a. Pressure demand or other positive pressure SCBAs, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA?

Comment: ____________________________________________  ___  ___
b. Appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres?

Comment: ____________________________________________________  ___  ___

c. Equivalent means for rescue where retrieval equipment is not required by this standard?

Comment: ____________________________________________________  ___  ___

5.10 Are frequent, random inspections performed to assure that all respirators are properly selected, used, cleaned, and maintained?

Comment: ____________________________________________________  ___  ___

6.0 Respirator Care and Maintenance

6.1 Are respirators cleaned and disinfected using procedures in 1910.134 Appendix B, or by equally effective methods?

Comment: ____________________________________________________  ___  ___

6.2 Are respirators assigned to more than one employee cleaned and disinfected before being worn by different individuals?

Comment: ____________________________________________________  ___  ___

6.3 Are emergency use respirators and respirators used for training and fit-testing cleaned and disinfected after each use?

Comment: ____________________________________________________  ___  ___

6.4 Are all respirators used in routine situations inspected before each use and during cleaning?

Comment: ____________________________________________________  ___  ___

6.5 Are respirators maintained for emergency use inspected at least monthly?

Comment: ____________________________________________________  ___  ___

6.6 Are emergency escape-only respirators inspected before being carried into the work place for use?
<table>
<thead>
<tr>
<th>Subject</th>
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<tbody>
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</tbody>
</table>

Comment: ________________________________________ __ __

6.7 Is a record maintained of inspection date(s), inspector name and findings for respirators for emergency use?

Comment: ________________________________________ __ __

6.8 Does the respirator inspection include:

a. A check of respirator function, tightness of connections and condition of various parts such as the face piece, head straps, valve connection tubes, filter media, etc.?

Comment: ________________________________________ __ __

b. A check of elastomeric parts for flexibility or deterioration?

Comment: ________________________________________ __ __

c. Recharging any oxygen or air cylinder when the pressure is 90% of the manufacturer’s recommended level or lower?

Comment: ________________________________________ __ __

d. A check that SCBA regulations and warning devices function properly?

Comment: ________________________________________ __ __

6.9 Are respirators, which fail inspection, or are otherwise found to be defective, removed from service to be discarded?

Comment: ________________________________________ __ __

6.10 Is the location of all respirators for emergency use clearly marked?

Comment: ________________________________________ __ __

6.11 Are employees instructed on the correct way to store respirators?

Comment: ________________________________________ __ __

6.12 Are checks made to ensure that the employees are not storing respirators in tool boxes or lockers without first
placing them in proper containers?

Comment: ____________________________________________________  __  __  

6.13 Are respirators stored or packed so that the face piece and exhalation valve is resting in a normal position?

Comment: ____________________________________________________  __  __  

6.14 Are provisions made to ensure that all filters, cartridges and canisters used in the work place are labeled and color-coded with the NIOSH approval label. And that the label is not removed and remains legible?

Comment: ____________________________________________________  __  __  

7.0 Training and Information

7.1 Has a training program been established for all employees assigned respirators or who may wear a respirator in an emergency?

Comment: ____________________________________________________  __  __  

7.2 Does the training program include Supervisors?

Comment: ____________________________________________________  __  __  

7.3 Are records kept of the training activities?

Comment: ____________________________________________________  __  __  

7.4 Does the training program address the following:

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

Comment: ____________________________________________________  __  __  

b. What are the limitations and capabilities of the respirators?

Comment: ____________________________________________________  __  __  

c. How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions?
Comment: _____________________________________  __  __

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

Comment: _____________________________________  __  __

e. What the procedures are for maintenance and storage of the respirator?

Comment: _____________________________________  __  __

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

Comment: _____________________________________  __  __

g. The general requirements of the OSHA Respiratory Protection Standard?

Comment: _____________________________________  __  __

7.5 Is the training conducted in a manner that is understandable to the employee?

Comment: _____________________________________  __  __

7.6 Is the training provided prior to requiring the employee to use a respirator in the work place?

Comment: _____________________________________  __  __

7.7 Is retraining conducted annually?

Comment: _____________________________________  __  __

7.8 Is retraining also conducted when the following situations occur?

a. Changes in the work place or the type of respirator render previous training obsolete?

Comment: _____________________________________  __  __
c. Inadequacies in the employee’s knowledge or use of the respirator that the employee has not retained the requisite understanding or skill?

Comment: ____________________________________________________________ __ __

d. Any other situation arises in which retraining appears necessary to ensure safe respirator use?

Comment: ____________________________________________________________ __ __

Based on the results of the auditors walk-through:

7.9 Are employees wearing the correct respirator for the task being performed?

Comment: ____________________________________________________________ __ __

Are respirators being worn properly?

Comment: ____________________________________________________________ __ __

7.11 Are conditions, which interfere with the face piece-to-face, seal absent?

Comment: ____________________________________________________________ __ __

8.0 Program Evaluation and Record Keeping

8.1 Are the following factors, as a minimum, include in the program evaluation:

a. Respirator fit?

Comment: ____________________________________________________________ __ __

b. Appropriate respirator selection?

Comment: ____________________________________________________________ __ __

c. Proper use of respirators in the work place?

Comment: ____________________________________________________________ __ __
d. Proper respirator maintenance?

Comment: ____________________________________________________________________  __ __

8.2 Are medical evaluations maintained and made available in accordance with 29 CFR 1910.1020 (Access to Employee Exposure and Medical Records)?

Comment: ____________________________________________________________________  __ __

8.3 Do fit test records include:

a. Employee name?

Comment: ____________________________________________________________________  __ __

b. Type of fit test procedure?

Comment: ____________________________________________________________________  __ __

c. Make, model, style and size respirator?

Comment: ____________________________________________________________________  __ __

d. Date of test?

Comment: ____________________________________________________________________  __ __

e. Pass/Fail results maintained at least until the next fit test?

Comment: ____________________________________________________________________  __ __

8.4 Are fit test records maintained at least until the next fit test?

Comment: ____________________________________________________________________  __ __

9.0 Program Audit Results

**Directions:** List below the item numbers that were answered “No” in the audit checklist. Identify the Corrective Action that will be taken to address each item. When the Corrective Action has been completed, fill in the Completion Date.

<table>
<thead>
<tr>
<th>Item#</th>
<th>Corrective Action</th>
<th>Completion Date</th>
</tr>
</thead>
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<tr>
<td>Subject</td>
<td>Respiratory Protection Program</td>
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</tr>
<tr>
<td>Effective Date</td>
<td>March 15, 2012</td>
<td></td>
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<tr>
<td>Revision Number</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Approved by</td>
<td>Barbara Williams</td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>Health and Safety Specialist</td>
<td></td>
</tr>
</tbody>
</table>

Auditor(s) Signature: _____________________________
Date: _____________________________