RESPIRATORY PROTECTION PROGRAM

Prepared By:

ENVIRONMENTAL HEALTH AND SAFETY OFFICE

07/2014 Revision

Emergency Phone Numbers

Emergency 911

Campus Police .....(704) 687-2200

Environmental Health and Safety Office .....(704) 687-1111

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POLICY

It is the policy of UNC Charlotte to protect its employees from hazardous atmospheres through a program of recognition, evaluation, engineering, administrative and work practice controls and personal protective equipment (PPE), including respirators. Hazard elimination, engineering and work practice controls shall be employed to control employee exposure to within allowable exposure limits as much as possible. Respirators and other PPE shall be provided to employees under this program. The University is committed to full compliance with applicable federal and state regulations pertaining to employee respiratory protection.

OBJECTIVE

The Respiratory Protection Program of UNC Charlotte is designed to protect employees by establishing accepted practices for respirator use, providing guidelines for training and respirator selection, and explaining proper storage, use and care of respirators. This program also serves to help the University and its employees comply with Occupational Safety and Health Administration (OSHA) respiratory protection requirements as found in 29 CFR 1910.134.

Definitions of key terms used in the Respiratory Protection Program can be found in the definitions section of the OSHA Respiratory Protection Standard - 1910.134 (b).

This Respiratory Protection Program establishes the minimum standards for the use and maintenance of respiratory protective equipment such that:

- The correct type of equipment is selected;
- It is maintained clean and in serviceable condition;
- A good fit is obtained;
- The user is appropriately trained in the use, care and limitations of the protective device;
- Employees are medically able to wear respiratory protection; and
- The Respiratory Protection Program is evaluated for effectiveness.

SCOPE

This program applies to all UNC Charlotte employees who are required to wear a respirator to perform assigned duties, and for any employee who voluntarily wears a respirator when one is not required.

RESPIRATORY PROTECTION PROGRAM RESPONSIBILITIES

The Respiratory Protection Program is administered by the Environmental Health and Safety office (EHS). EHS provides a central body on the UNC Charlotte Campus that is responsible for evaluating, fitting, and maintaining respiratory protection and for training University personnel in its use. EHS shall conduct respirator fit testing as required or deemed necessary. In addition, EHS shall coordinate medical surveillance for program participants.

In addition to those responsibilities defined by the University Safety Policy Statement, the following individuals bear responsibility for the plan as described below.

1. Environmental Health and Safety Office (EHS)
    - Developing, implementing, administering and reviewing the Respiratory Protection Program;
    - Evaluating respiratory hazards;
    - Providing guidance on the selection, purchase, use, maintenance and storage of respirators;
    - Providing fit testing to respiratory users;
    - Coordinating medical surveillance for program participants.

2. The Supervisor, who has overall responsibility for his or her employees, including responsibility for:
    - Being familiar with University policies and programs which pertain to his or her job duties and work areas;
    - Identifying respiratory hazards and contacting EHS for risk assessment consultation;
    - Ensuring all employees that are enrolled in the respiratory protection program complete medical surveillance, fit testing and training;
    - Enforcing the respiratory protection program safety requirements;
    - Allocating or securing funds for respiratory equipment and medical exams as needed.

3. Employees are responsible for:
    - Understanding and complying with the Respiratory Protection Program requirements. Wearing, storing, cleaning and maintaining the respirator. that they were fitted for during their fit testing;
    - Reporting any defects in the equipment or any respiratory usage symptoms of illness to his or her supervisor;

- Following both oral and written instructions from his or her supervisor;
- Requesting information and training when unsure if respiratory protection is necessary.

PROGRAM PARTICIPATION

This program applies to all UNC Charlotte employees who are required to wear a respirator to perform their assigned duties.

Employees must wear respiratory protection and therefore participate in the respiratory protection program, when any of the following conditions or circumstances applies:

- Performing jobs during which workers are specifically required by state or federal regulation to wear respiratory protection;
- Participating in activities which produce airborne contaminants above OSHA permissible exposure limits that cannot be controlled adequately by engineering methods;
- Working in atmospheres containing airborne contaminants which could reasonably be expected to exceed permissible or recommended exposure limits;
- Working in an atmosphere which is, may be, or may become oxygen deficient;
- When protection from bio-aerosols, such as tuberculosis and influenza, is mandatory for healthcare workers and first responders.

MEDICAL SURVEILLANCE

Prior to being fitted for a respirator, the individual's medical status shall be evaluated by a physician to determine if they are physically able to safely use a respirator. Initial medical evaluations shall be provided at no cost to the employee during normal working hours.

Those individuals who fail to meet any medical clearance criteria established by the attending physician may not participate in the University Respiratory Protection Program, will not be issued a respirator and may not utilize a respirator in the course of their employment at the University.

Individuals participating in the program must complete an "OSHA Respirator Medical Evaluation Questionnaire" (see Appendix A). In addition to the OSHA Respirator Medical Evaluation Questionnaire, the attending physician shall be provided the following information:

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

The attending physician will review the OSHA Respirator Medical Evaluation Questionnaire, additional information and the results of the physical exam and decide if, in his or her opinion, the individual can safely wear a respirator.

Follow-up medical evaluations will be provided to participants of the Respiratory Protection Program who provide a positive response to any question among questions 1 through 8 in Section Two of the Respiratory Medical Evaluation Questionnaire or whose initial medical examination demonstrates the need for follow-up medical examination.

Additional medical evaluations will be provided if:

- An employee reports medical signs or symptoms that are related to the ability to use the respirator;
- A Physician or other Licensed Health Care Professional (PLHCP), supervisor, or the respirator program administrator informs the employer that an employee needs to be reevaluated;
- A change occurs in the workplace conditions that may result in a substantial increase in the physiological burden placed on the employee.

RESPIRATORY PROTECTION EQUIPMENT SELECTION

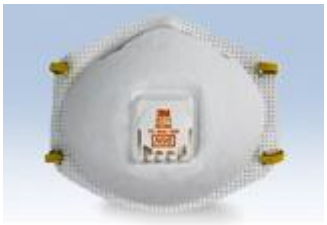
EHS will evaluate respiratory hazards in the workplace, identifying relevant workplace and user factors and assist supervisors in the selection of appropriate respirators. EHS personnel may use the "Respiratory Protection Decision Tree" in the selection process (see Appendix B). Please contact the EHS office before selecting and making available any respirator.

Please see general guidance for selection of filtering facepieces and respirators below:

Nuisance Masks and Medical/Surgical Masks are generally not "tight fitting" as they do not form a seal with the wearer's face, and therefore, do not require fit testing. These masks do not cause appreciable resistance to breathing, and therefore, do not require medical clearance prior to disbursement. Supervisors may procure and distribute nuisance and medical/surgical masks upon request.

Filtering Facepieces/Respirators (*N95/N99 Respirator*) are generally tight fitting, National Institute Occupational Safety Health (NIOSH) approved and have increased air

flow resistance. For this reason employees who are **required** to wear tight fitting facepiece respirators must follow the guidelines for medical evaluation, fit testing and




training.

Air-Purifying Respirator *(Half-Face and Full Face Respirators*) are tight fitting, NIOSH approved and have increased air flow resistance. These respirators should only be worn after a medical evaluation, fit testing and training. Respirators shall be equipped with appropriate filters and/or cartridges to protect against the specific


hazard(s) required.

Powered Air Purifying Respirators (PAPR) and other specialized respirators may be obtained under the guidance of EHS. Please contact EHS for assistance.

VOLUNTARY USE OF RESPIRATORS

Employees and students, at their request, may be provided with N95/N99 respirators to use in areas that have been determined to be non-hazardous. In addition, employees and students may supply their own N95/N99 respirators for use in non-hazardous situations. Employees and students must fill out and submit an Appendix E voluntary usage form to the EHS office before voluntarily using a N95/N99 respirator.

Most workers wearing respirators do so because it is required by their employer as protection from airborne hazards. However, there are some situations where you may want to wear a respirator even though respirator use is not required by your employer or an OSHA standard.

For example, you might request to wear a respirator to avoid exposure to an airborne hazard, even if the amount of the hazardous substance does not exceed the limits set by OSHA standards. Another example where you might want to voluntarily use a respirator would be to reduce exposure and increase comfort when working in non-hazardous situations (for example, creating dust while sweeping a shop floor). If your employer permits you to wear a respirator where it is not required, it is considered voluntary respirator use.

Before you can voluntarily use a respirator, your employer must ensure that its use does not present a health hazard to you. To do this, your employer must implement certain elements of a written respiratory protection program necessary to ensure that any worker using a respirator voluntarily is medically able to use that respirator. In addition, your employer must ensure that the respirator is properly cleaned, stored and maintained so that its use does not present a health hazard to you.

It must be noted that voluntary usage of ½ face, full face and other high protection level respiratory PPE requires full medical evaluation, fit testing, training and EHS approval before usage.

RESPIRATOR FITTING AND FIT TESTING

Fit testing is a procedure used to determine how well a respirator "fits", that is, whether the respirator forms a good seal to the wearer's face. If a good face-to-facepiece seal is not achieved, this may allow the respirator to leak. Since only tight fitting respirators rely on this seal, they are the only type of respirator for which fit testing is valid.

Fit testing is provided by EHS, or other qualified providers, to ensure an initial acceptable seal. Men with facial hair or stubble which interfere with the seal of the respirator may not be fit tested until the facial hair is removed.

As a primary method, the TSI Portacount quantitative fit testing machine and associated software shall be used to conduct quantitative fit testing on applicable personnel, including N95/N99 users in mandatory usagesituations.. As a secondary method, qualitative fit testing will be performed in accordance with OSHA accepted fit test protocols (Appendix C) using isoamyl acetate (banana oil), saccharin solution, denatonium benzoate (bitrex™), or stannic chloride (irritant smoke). After a successful fit test, the EHS office shall complete a "Respirator Fit Test Card" (Appendix D).

Fit testing must be repeated annually or semi-annually as required by specific OSHA standards (e.g. asbestos, acrylonitrile, lead, benzene or formaldehyde). The employer shall conduct additional fit testing whenever there is a change in an employee's physical condition that could affect respirator fit.

In addition, individuals must be re-tested if any of the following conditions occur:

- An obvious change in body weight;

- Facial scarring in the area of the face piece seal;
- Dental changes, such as the removal of multiple teeth or the fitting of dentures; or
- Reconstructive or cosmetic surgery.

TRAINING

A qualified EHS representative or a qualified designee shall instruct each employee prior to their first respirator use and annually thereafter. Retraining shall be required immediately if any changes in the workplace or the type of respirator invalidates previous training, inadequacies in the employee knowledge of respirators, or any situation arising in which retraining appears necessary to ensure safe respirator use. The education and training in the use of respirators shall include:

- A complete description of the respirator selection process and the reason for the selection of the specific equipment issued;
- The nature, extent, and effects of respiratory hazards to which the employee may be exposed as required under the Hazard Communication standard (29 CFR 1910.1200);
- Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the effectiveness of the respirator;
- An explanation of the operation, limitations, and capabilities of the selected respirator(s);
- Instruction in procedures for inspection, donning and removal, checking the fit and seals, and in the wearing of the respirator, including sufficient practice to enable the employee to become thoroughly familiar with, confident, and effective in performing these tasks;
- Explanation of the procedures for maintenance and storage of the respirator;
- Instruction on how to deal with emergency situations involving the use of respirators or with respirator malfunctions, and;
- The contents of the OSHA Respiratory Protection standard and of the written respiratory protection program, its location and availability.

USE OF RESPIRATORS

All personnel required to wear a respirator shall guard the respirator against damage at all times. If a respirator malfunction occurs, leave the area, remove the respirator and contact EHS to arrange appropriate repairs. Inform your supervisor of any change in medical or physical status that may impede the ability to safely wear a respirator.

When using any tight fitting respirator, including N95/N99, half mask, full facepiece, PAPR, supplied-air or SCBA, the wearer must:

- Use only in the atmospheres specified during respirator selection;

- Be certain that glasses or goggles are worn in such a manner that they do not interfere with the seal of the facepiece;
- Be clean-shaven in the area of the respirator seal;
- Leave the area if any contaminant odors are detected through the mask, or if breathing becomes difficult;
- Leave the respirator use area to wash their faces and respirator facepieces as necessary to prevent skin irritation associated with respirator use;
- Perform the job with caution to insure that the face-piece to face seal is not broken.

If any problems occur (i.e., respirator malfunction, fatigue, anxiety, contaminant breakthrough, increased effort needed to breathe, etc.), exit the area, remove the respirator, and notify your supervisor and EHS office. Remember that the key to maximum respiratory protection with a respirator is to obtain and maintain a comfortable, pressure-tight seal.

Half-Mask, Full Facepiece and Powered Air-Purifying (PAPR) Respirators

Air purifying respirators are equipped with filters and/or cartridges that remove contaminants from the air as the wearer breathes. Since air-purifying respirators do not supply air, they must not be used in oxygen-deficient or Immediate Danger to Life and Health (IDLH) atmospheres. In addition, they cannot be used to protect against chemicals with poor olfactory (odor) warning properties. Air purifying respirators must only be used for protection from the specific agent or agents listed on the color coded canisters or filters. Program participants must describe the environment in which they intend to use the respirator so that EHS will choose the appropriate canisters or filters for the application.

When using a negative pressure half-mask or full facepiece air-purifying respirator the wearer must:

- Follow the manufacture guidelines;
- Use the mask only in the atmospheres specified during the selection process;
- Install the appropriate cartridges/filters;
- Don and adjust the mask as trained in the fitting session;
- Perform a Positive Pressure Check: Close off the exhalation valve and exhale gently into the facepiece. The face seal 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;
- Perform a Negative Pressure Check: Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s), inhale gently so that the facepiece collapses slightly, and hold the breath for ten seconds. If the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected, the seal of the respirator is considered satisfactory;

- Leave the respirator use area immediately to change the filter elements whenever they detect the warning properties of the contaminant or a change in breathing resistance.

MAINTENANCE AND CARE OF RESPIRATORS

The basic elements of respirator maintenance include inspection for defects, replacement of defective parts and respirator cleaning and storage.

Inspection for Defects

The ongoing maintenance of the respirators themselves is an essential part of the Respiratory Protection Program. Primary responsibility for maintaining a given respirator in clean and serviceable condition lies with the program participant to whom the respirator is assigned. EHS will assist individuals by inspecting the respirator at the annual fit test and by recommending replacement parts as needed. Respirator inspection shall include at a minimum:

- Checking facepiece for excessive dirt, cracks, tears or holes, distortion, cracked or loose fitting lenses;
- Checking head straps for breaks or tears, loss of elasticity, broken or malfunctioning buckles;
- Checking inhalation and exhalation valves for missing valves, detergent residue, dust particles or dirt on valve or valve seat, cracks tears or distortion in the valve or the valve seat, or missing exhalation valve cover;
- Checking filters or canisters for appropriateness to the hazard, missing or worn gaskets, cracks or dents in filter housing or expired date; and
- Checking hoses for cracks or holes and missing or lose clamps.

When a respirator is utilized for protection against gases or vapors, the respirator filters or cartridges should be replaced if contaminant odor is detected (breakthrough) or breathing resistance increases noticeably.

Cleaning

Respirators shall be cleaned according to the following schedule:

- Routinely used respirators issued for the exclusive use of an employee shall be cleaned and disinfected after each day's use;
- Routinely used respirators issued to more than one employee shall be cleaned and disinfected after each use;
- Respirators maintained for emergency use shall be cleaned and disinfected after each use; and
- Respirators used in fit-testing and training shall be cleaned and disinfected after each use.

Respirators will be cleaned by the manufacturer guidelines or in the following manner:

1. 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.
2. Wash components in 43 °C (110 °F) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
3. Rinse components thoroughly in clean, warm 43 °C (110 °F), preferably running water and drain.
4. When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:

    - Hypochlorite solution (50 PPM of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of water at 43 °C (110 °F);
    - Aqueous solution of iodine (50 PPM iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6-8 grams ammonium and/or potassium iodine/100 cc of 45% alcohol) to one liter of water at 43 °C (110 °F);
    - Other commercially available cleansers of equivalent disinfectant quality when used as directed, unless the respirator manufacturer recommends against their use.
5. Rinse components thoroughly in clean, warm 43 °C (110 °F), preferably running water. 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.
6. Components should be hand-dried with a clean lint-free cloth or air-dried.
7. Reassemble facepiece, replacing filters, cartridges, and canisters where necessary.
8. Test the respirator to ensure that all components work properly.

PAPRs and SCBAs should be cleaned following the manufacturers recommendations.

Storage

All respirators shall be stored in accordance with manufacturer specifications. As a standard guideline, all respirators should be stored in a manner that protects them from damage, dust, sunlight, extreme temperatures, excessive moisture, or damaging chemicals. In locations where weathering, contamination, or deterioration of the respirator could occur, respirators shall be stored in compartments built to protect them. Respirators shall be packed or stored to prevent deformation of the facepiece or exhalation valve.

Repairs

The employer shall ensure that respirators that fail inspection are removed from service and repaired or adjusted. Repairs or adjustments to respirators are to be made only by personnel appropriately trained to perform such operations, using parts designed for the respirator. No repairs shall be performed that are outside the manufacturer's recommendations concerning the type and extent of repairs that can be performed.

CARTRIDGE REPLACEMENT

Air purifying respirators used for particulate control require filter cartridge change out when air flow through the cartridge/s is restricted in such as manner as to increase breathing effort of person wearing respirator.

Air-purifying respirators used for protection against chemical contamination must be replaced as necessary. Change schedules are based on type of contaminant, concentration of contaminant, temperature and humidity. Please contact the EHS Department for cartridge replacement guidelines

POTENTIAL IMMEDIATELY DANGEROUS TO LIFE AND HEALTH (IDLH) ATMOSPHERES

University personnel are prohibited from entering an atmosphere that is suspected for being oxygen-deficient, oxygen-enriched, or has unknown or potentially IDLH concentrations of a hazardous chemical. Charlotte Mecklenburg Fire Department personnel are equipped with Self Contained Breathing Apparatus (SCBA) equipment that will allow for safe entry into IDLH atmospheres if necessary. The following recognized conditions have the capability to present IDLH atmospheres on campus:

1. The release of refrigerants from chiller units in various campus facilities can produce IDLH atmospheres. Mechanical rooms in various campus facilities are equipped with air conditioning chiller units that use refrigerants. If a large quantity of refrigerant is released from a chiller unit an IDLH atmosphere can be produced within the mechanical room due to oxygen displacement. Refrigerants are heavier than air and can settle out in low lying areas such as sumps and pits. Mechanical rooms with chiller equipment are equipped with refrigerant detection alarm devices to warn entrants of hazardous atmospheric conditions due to refrigerant release.

   University employees and contractors are not permitted to enter the mechanical rooms when the refrigerant alarm is sounding unless the unit is being tested or serviced and it is known that there is no refrigerant release or leak. Charlotte Mecklenburg Fire Department personnel that are equipped with SCBA or supplied air respirator may enter an oxygen deficient atmosphere if conditions require entry.

2. Manholes and other confined spaces can contain oxygen deficient or hazardous IDLH atmospheres, such as hydrogen sulfide and carbon monoxide, if not properly ventilated prior to entry. UNC Charlotte personnel and contractors are required to ventilate confined spaces prior to entry if atmospheric conditions are shown to be hazardous by a multi-gas meter or equivalent equipment.. The confined space must be tested in a stratified method to show that the entire space has safe oxygen levels and is free from hazardous atmospheric constituents throughout its entirety. Confined space entry procedures must be followed to enter any permit required confined space.

RECORD KEEPING

Written information regarding the medical evaluations, medical opinions related to the worker's ability to wear a respirator, fit testing, inspection of emergency use respirators and the overall respiratory protection program must be maintained. The information is necessary to facilitate employee involvement, to assist in auditing the program, and provide a record for compliance determination.

Respiratory Protection Program

The responsible supervisor who has an employee included in the Respiratory Protection Program must have access to the UNC Charlotte Respiratory Protection Program. The document is available on-line at the EHS website.

Medical Evaluation

Records of the medical evaluations required by this program must be retained and made available in accordance with OSHA 29 CFR 1910.1020. These records will be maintained by the EHS Office for the duration of the employee's employment with UNC Charlotte plus 30 years.

Physician's Certification for Respirator Use

The only information the PLHCP may provide to the Program Administrator and the employee's responsible supervisor is a written recommendation regarding the employee's ability to use a respirator.
Responsible supervisors must obtain copy of the medical Certification for Respirator use and provide a copy to the Program Administrator prior to fit testing and training.

Fit Test/Training Records

A fit test/training record will be established of all qualitative and quantitative fit tests administered to an employee. EHS will send a copy of the fit test/training record with the employee, or through Campus Mail, to the employee's responsible supervisor. These records will be maintained for respirator users until the next fit test is administered.
Fit Test records will include the following information:

- Name and identification number of the employee tested
- Type of fit test performed
- Specific make, model, style and size of respirator
- Date of test
- Pass/Fail results for qualitative fit tests or fit factor and a copy of the print-out for quantitative fit tests

Appendix A

OSHA Respirator Medical Evaluation Questionnaire

To the employer:

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

To the employee:

Can you read (circle one): Yes/No

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

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

1. Today's date:_____
2. Your name:_____
4. Sex (circle one): Male/Female
5. Your height: _____ ft. _____ in.
6. Your weight: _____ lbs.
7. Your job title:_____
8. A phone number where you can be reached by the health care professional who reviews this questionnaire (include the Area Code): _____
9. The best time to phone you at this number: _____
10. Has your employer told you how to contact the health care professional who will review this questionnaire (circle one): Yes/No

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

    a. _____N95/99, R95/99 or P95/99 respirator (filtering facepiece, non-cartridge type only).

    b. _____Other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus).

12. Have you worn a respirator (circle one): Yes / No

    If ``yes,'' what type(s):_____

Part A. Section 2 (Mandatory)

Questions 1 through 9 must be answered by every employee who has been selected to use any type of respirator (Check "yes" or "no").

	YES	NO
1. Do you currently smoke tobacco, or have you smoked tobacco in the past month?		
2. Have you ever had any of the following conditions?		
a. Seizures (fits)		
b. Diabetes (sugar disease)		
c. Allergic reactions that interfere with your breathing		
d. Claustrophobia (fear of closed-in places)		
e. Trouble smelling odors		
3. Have you ever had any of the following pulmonary or lung problems?		
a. Asbestosis		
b. Asthma		
c. Chronic Bronchitis		
d. Emphysema		
e. Pneumonia		
f. Tuberculosis		
g. Silicosis		
h. Pneumothorax (collapsed lung)		
i. Lung cancer		
j. Broken ribs		
k. Any chest injuries or surgeries		
l. Any other lung problem that you have been told about		
4. Do you currently have any of the following symptoms of pulmonary or lung illness?		
a. Shortness of breath		
b. Shortness of breath when walking fast on level ground or walking up a slight hill or incline		
c. Shortness of breath when walking with other people at an ordinary pace on level ground		
d. Have to stop for breath when walking at your own pace on level ground		
e. Shortness of breath when washing or dressing yourself		

f. Shortness of breath that interferes with you job		
g. Coughing that produces phlegm (thick sputum)		
h. Coughing that wakes you early in the morning		
i. Coughing that occurs mostly when you are lying down		
j. Coughing up blood in the last month		
k. Wheezing		
l. Wheezing that interferes with you job		
m. Chest pain when you breathe deeply		
n. Any other symptoms that you think may be related to lung problems		
	YES	NO
5. Have you ever had any of the following cardiovascular or heart problems?		
a. Heart attack		
b. Stoke		
c. Angina		
d. Heart Failure		
e. Swelling in your legs or feet (not caused by walking)		
f. Heart arrhythmia (heart beating irregularly)		
g. High blood pressure		
h. Any other heart problem that you have been told about		
6. Have you ever had any of the following cardiovascular or heart symptoms?		
a. Frequent pain or tightness in your chest		
b. Pain or tightness in your chest during physical activity		
c. Pain or tightness in your chest that interferes with your job		
d. In the past 2 years, have you noticed your heart skipping or missing a beat		
e. Heartburn or indigestion that is not related to eating		
f. Any other symptoms that you think may be related to heart or circulation problems		
7. Do you currently take medication for any of the following problems?		
a. Breathing or lung problems		
b. Heart trouble		
c. Blood pressure		
d. Seizures (fits)		
8. Have you used a respirator before? (If no skip to question 10)		

9. If you have used a respirator, have you ever had any of the following problems?		
a. Eye irritation		
b. Skin allergies or rashes		
c. Anxiety		
d. General weakness or fatigue		
e. Any other problem that interferes with your use of a respirator		
10. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire		

Employee Signature: _____

Date: _____

Questions 10 to 15 below must be answered by every employee who has been selected to use either a <u>full-facepiece respirator or a self-contained breathing apparatus (SCBA)</u>.

For employees who have been selected to use other types of respirators such as N95 and N99 class respirators, answering questions 10 through 15 below is <u>voluntary</u>.

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

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

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

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

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

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

Part B (Optional)

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

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

   If ``yes,'' do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you're working under these conditions: Yes / No

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

   If ``yes,'' name the chemicals if you know them:_____

   _____

   _____

3. Have you ever worked with any of the materials, or under any of the conditions, listed below:

   a. Asbestos: Yes / No
   b. Silica (e.g., in sandblasting): Yes / No
   c. Tungsten/cobalt (e.g., grinding or welding this material): Yes / No
   d. Beryllium: Yes / No
   e. Aluminum: Yes / No
   f. Coal (for example, mining): Yes / No
   g. Iron: Yes / No
   h. Tin: Yes / No
   i. Dusty environments: Yes / No
   j. Any other hazardous exposures: Yes / No

   If ``yes,'' describe these exposures:_____

   _____

   _____

4. List any second jobs or side businesses you have:_____

   _____

5. List your previous occupations:_____

   _____

6. List your current and previous hobbies:_____

_____

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

   If ``yes,'' were you exposed to biological or chemical agents (either in training or combat): Yes / No

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

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

   If ``yes,'' name the medications if you know them:_____

10. Will you be using any of the following items with your respirator(s)?
    a. HEPA Filters: Yes / No
    b. Canisters (for example, gas masks): Yes / No
    c Cartridges: Yes / No

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

12. During the period you are using the respirator(s), is your work effort:
    a. Light (less than 200 kcal per hour): Yes / No

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

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

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

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

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

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

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

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

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

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

_____

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

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

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

_____

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

_____

_____

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

Name of the first toxic substance:_____

Estimated maximum exposure level per shift:_____

Duration of exposure per shift:_____

Name of the second toxic substance:_____

Estimated maximum exposure level per shift:_____

Duration of exposure per shift:_____

Name of the third toxic substance:_____

Estimated maximum exposure level per shift:_____

Duration of exposure per shift:_____

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

_____

_____

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

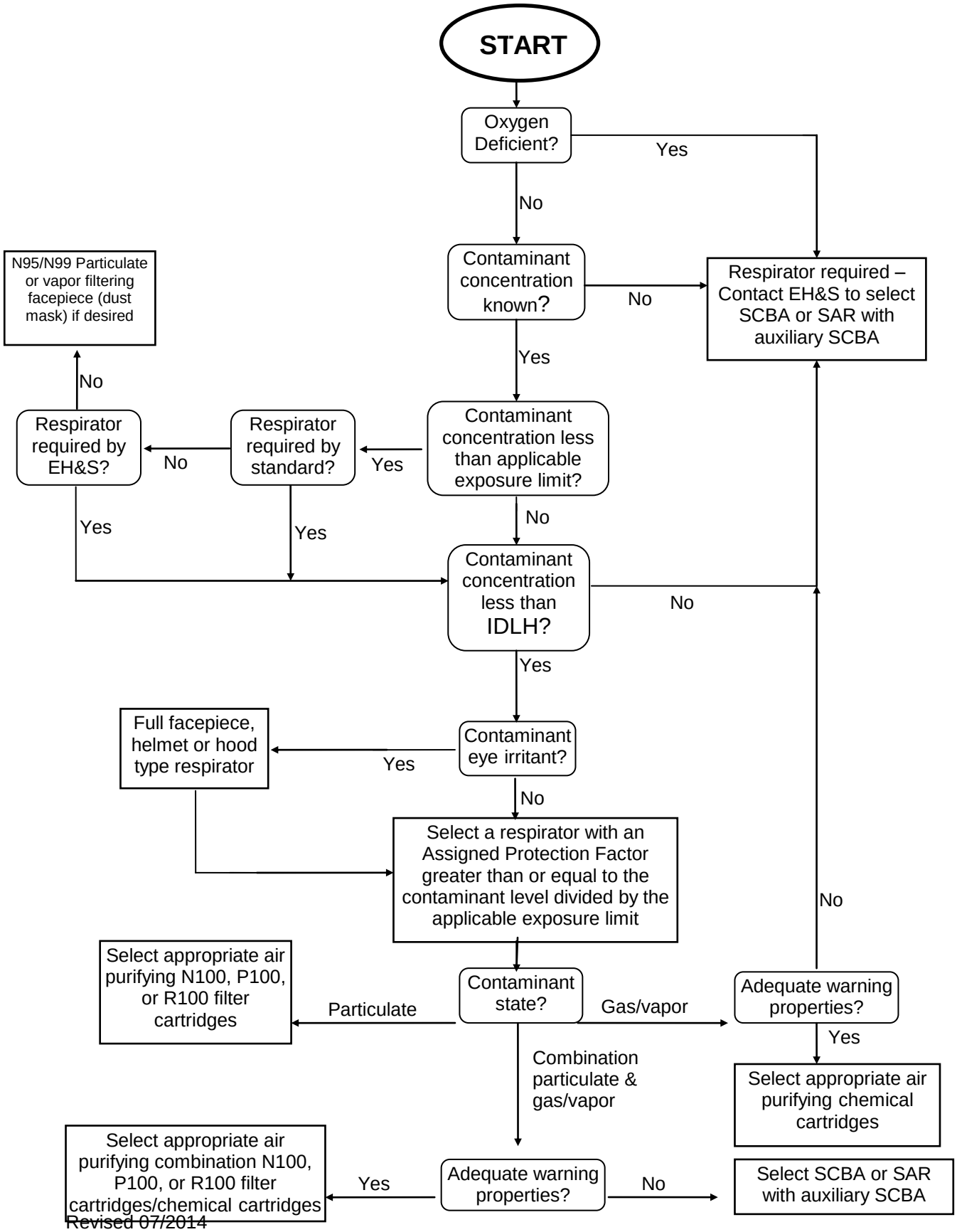
_____

_____

_____

Source: Occupational Safety and Health Administration (2003). Respiratory Protection. *Occupational Safety and Health Standards for General Industry* [On-Line]. www.osha.gov

Appendix B
Respiratory Protection Selection Decision Tree



Appendix C

Fit Testing Procedures

A. Fit Testing Procedures -- General Requirements

The employer shall conduct fit testing using the following procedures. The requirements in this appendix apply to all OSHA-accepted fit test methods, both QLFT and QNFT.

1. The test subject shall be allowed to pick the most acceptable respirator from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

2. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This instruction may not constitute the subject's formal training on respirator use, because it is only a review.

3. The test subject shall be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.

4. The test subject shall be instructed to hold each chosen facepiece up to the face and eliminate those that obviously do not give an acceptable fit.

5. The more acceptable facepieces are noted in case the one selected proves unacceptable; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the points in the following item A.6. If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.

6. Assessment of comfort shall include a review of the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:

   (a) Position of the mask on the nose

   (b) Room for eye protection

   (c) Room to talk

   (d) Position of mask on face and cheeks

7. The following criteria shall be used to help determine the adequacy of the respirator fit:

   (a) Chin properly placed;

   (b) Adequate strap tension, not overly tightened;

   (c) Fit across nose bridge;

   (d) Respirator of proper size to span distance from nose to chin;

   (e) Tendency of respirator to slip;

   (f) Self-observation in mirror to evaluate fit and respirator position.

8. The test subject shall conduct a user seal check, either the negative and positive pressure seal checks described in Appendix B-1 of this section or those recommended by the respirator manufacturer which provide equivalent protection to the procedures in Appendix B-1. Before conducting the negative and positive pressure checks, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. Another facepiece shall be selected and retested if the test subject fails the user seal check tests.

9. The test shall not be conducted if there is any 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. Any type of apparel which interferes with a satisfactory fit shall be altered or removed.

10. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician or other licensed health care professional, as appropriate, to determine whether the test subject can wear a respirator while performing her or his duties.

11. If the employee finds the fit of the respirator unacceptable, the test subject shall be given the opportunity to select a different respirator and to be retested.

12. Exercise regimen. Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure. The description of the process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.

13. The fit test shall be performed while the test subject is wearing any applicable safety equipment that may be worn during actual respirator use which could interfere with respirator fit.

14. Test Exercises. (a) The following test exercises are to be performed for all fit testing methods prescribed in this appendix, except for the CNP method. A separate fit testing exercise regimen is contained in the CNP protocol. The test subject shall perform exercises, in the test environment, in the following manner:

    (1) Normal breathing. In a normal standing position, without talking, the subject shall breathe normally.

    (2) Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.

    (3) Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.

    (4) Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).

    (5) Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.

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

    (6) Grimace. The test subject shall grimace by smiling or frowning. (This applies only to QNFT testing; it is not performed for QLFT)

    (7) Bending over. The test subject shall bend at the waist as if he/she were to touch his/her toes. Jogging in place shall be substituted for this exercise in those test environments such as shroud type QNFT or QLFT units that do not permit bending over at the waist.

    (8) Normal breathing. Same as exercise (1).(b) Each test exercise shall be performed for one minute except for the grimace exercise which shall be performed for 15 seconds. The test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried. The respirator shall not be

adjusted once the fit test exercises begin. Any adjustment voids the test, and the fit test must be repeated.

B. Qualitative Fit Test (QLFT) Protocols

1. General

   (a) The employer shall ensure that persons administering QLFT are able to prepare test solutions, calibrate equipment and perform tests properly, recognize invalid tests, and ensure that test equipment is in proper working order.

   (b) The employer shall ensure that QLFT equipment is kept clean and well maintained so as to operate within the parameters for which it was designed.

2. BitrexTM (Denatonium Benzoate) Solution Aerosol Qualitative Fit Test Protocol

   The BitrexTM (Denatonium benzoate) solution aerosol QLFT protocol uses the published saccharin test protocol because that protocol is widely accepted. Bitrex is routinely used as a taste aversion agent in household liquids which children should not be drinking and is endorsed by the American Medical Association, the National Safety Council, and the American Association of Poison Control Centers. The entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

   (a) Taste Threshold Screening.

      The Bitrex taste threshold screening, performed without wearing a respirator, is intended to determine whether the individual being tested can detect the taste of Bitrex.

      (1) During threshold screening as well as during fit testing, subjects shall wear an enclosure about the head and shoulders that is approximately 12 inches (30.5 cm) in diameter by 14 inches (35.6 cm) tall. The front portion of the enclosure shall be clear from the respirator and allow free movement of the head when a respirator is worn. An enclosure substantially similar to the 3M hood assembly, parts # FT 14 and # FT 15 combined, is adequate.

      (2) The test enclosure shall have a \3/4\ inch (1.9 cm) hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle.

      (3) The test subject shall don the test enclosure. Throughout the threshold screening test, the test subject shall breathe through his or her slightly open mouth with tongue extended. The subject is instructed to report when he/she detects a bitter taste

      (4) Using a DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent, the test conductor shall spray the Threshold Check Solution into the

enclosure. This Nebulizer shall be clearly marked to distinguish it from the fit test solution nebulizer.

(5) The Threshold Check Solution is prepared by adding 13.5 milligrams of Bitrex to 100 ml of 5% salt (NaCl) solution in distilled water.

(6) To produce the aerosol, the nebulizer bulb is firmly squeezed so that the bulb collapses completely, and is then released and allowed to fully expand.

(7) An initial ten squeezes are repeated rapidly and then the test subject is asked whether the Bitrex can be tasted. If the test subject reports tasting the bitter taste during the ten squeezes, the screening test is completed. The taste threshold is noted as ten regardless of the number of squeezes actually completed.

(8) If the first response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the Bitrex is tasted. If the test subject reports tasting the bitter taste during the second ten squeezes, the screening test is completed. The taste threshold is noted as twenty regardless of the number of squeezes actually completed.

(9) If the second response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the Bitrex is tasted. If the test subject reports tasting the bitter taste during the third set of ten squeezes, the screening test is completed. The taste threshold is noted as thirty regardless of the number of squeezes actually completed.

(10) The test conductor will take note of the number of squeezes required to solicit a taste response.

(11) If the Bitrex is not tasted after 30 squeezes (step 10), the test subject is unable to taste Bitrex and may not perform the Bitrex fit test.

(12) If a taste response is elicited, the test subject shall be asked to take note of the taste for reference in the fit test.

(13) Correct use of the nebulizer means that approximately 1 ml of liquid is used at a time in the nebulizer body.

(14) The nebulizer shall be thoroughly rinsed in water, shaken to dry, and refilled at least each morning and afternoon or at least every four hours.

(b) Bitrex Solution Aerosol Fit Test Procedure

(1) The test subject may not eat, drink (except plain water), smoke, or chew gum for 15 minutes before the test.

(2) The fit test uses the same enclosure as that described in 4. (a) above.

(3) The test subject shall don the enclosure while wearing the respirator selected according to section I. A. of this appendix. The respirator shall be properly adjusted and equipped with any type particulate filter(s).

(4) A second DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent is used to spray the fit test solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the screening test solution nebulizer.

(5) The fit test solution is prepared by adding 337.5 mg of Bitrex to 200 ml of a 5% salt (NaCl) solution in warm water.

(6) As before, the test subject shall breathe through his or her slightly open mouth with tongue extended, and be instructed to report if he/she tastes the bitter taste of Bitrex.

(7) The nebulizer is inserted into the hole in the front of the enclosure and an initial concentration of the fit test solution is sprayed into the enclosure using the same number of squeezes (either 10, 20 or 30 squeezes) based on the number of squeezes required to elicit a taste response as noted during the screening test.

(8) After generating the aerosol, the test subject shall be instructed to perform the exercises in section I. A. 14. of this appendix.

(9) Every 30 seconds the aerosol concentration shall be replenished using one half the number of squeezes used initially (e.g., 5, 10 or 15).

(10) The test subject shall indicate to the test conductor if at any time during the fit test the taste of Bitrex is detected. If the test subject does not report tasting the Bitrex, the test is passed.

(11) If the taste of Bitrex is detected, the fit is deemed unsatisfactory and the test is failed. A different respirator shall be tried and the entire test procedure is repeated (taste threshold screening and fit testing).

C. Quantitative Fit Test (QNFT) Protocols

The following quantitative fit testing procedures have been demonstrated to be acceptable: Quantitative fit testing using a non-hazardous test aerosol (such as corn oil, polyethylene glycol 400 [PEG 400], di-2-ethyl hexyl sebacate [DEHS], or sodium chloride) generated in a test chamber, and employing instrumentation to quantify the fit of the respirator; Quantitative fit testing using ambient aerosol as the test agent and appropriate instrumentation (condensation nuclei counter) to quantify the respirator fit; Quantitative fit testing using controlled negative pressure and appropriate

instrumentation to measure the volumetric leak rate of a facepiece to quantify the respirator fit.

1. General

   (a) The employer shall ensure that persons administering QNFT are able to calibrate equipment and perform tests properly, recognize invalid tests, calculate fit factors properly and ensure that test equipment is in proper working order.

   (b) The employer shall ensure that QNFT equipment is kept clean, and is maintained and calibrated according to the manufacturer's instructions so as to operate at the parameters for which it was designed.

2. Ambient aerosol condensation nuclei counter (CNC) Portacount quantitative fit testing protocol.

   The ambient aerosol condensation nuclei counter (CNC) quantitative fit testing, Portacount, protocol quantitatively fit tests respirators with the use of a probe. The probed respirator is only used for quantitative fit tests. A probed respirator has a special sampling device, installed on the respirator that allows the probe to sample the air from inside the mask. A probed respirator is required for each make, style, model, and size that the employer uses and can be obtained from the respirator manufacturer or distributor. The CNC instrument manufacturer, TSI Inc., also provides probe attachments (TSI sampling adapters) that permit fit testing in an employee's own respirator. A minimum fit factor pass level of at least 100 is necessary for a half-mask respirator and a minimum fit factor pass level of at least 500 is required for a full facepiece negative pressure respirator. The entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

   (a) Portacount Fit Test Requirements.

      (1) Check the respirator to make sure the sampling probe and line are properly attached to the facepiece and that the respirator is fitted with a particulate filter capable of preventing significant penetration by the ambient particles used for the fit test (e.g., NIOSH 42 CFR 84 series 100, series 99, or series 95 particulate filter) per manufacturer's instruction.

      (2) Instruct the person to be tested to don the respirator for five minutes before the fit test starts. This purges the ambient particles trapped inside the respirator and permits the wearer to make certain the respirator is comfortable. This individual shall already have been trained on how to wear the respirator properly.

      (3) Check the following conditions for the adequacy of the respirator fit: Chin properly placed; Adequate strap tension, not overly tightened; Fit across

nose bridge; Respirator of proper size to span distance from nose to chin; Tendency of the respirator to slip; Self-observation in a mirror to evaluate fit and respirator position.

(4) Have the person wearing the respirator do a user seal check. If leakage is detected, determine the cause. If leakage is from a poorly fitting facepiece, try another size of the same model respirator, or another model of respirator.

(5) Follow the manufacturer's instructions for operating the Portacount and proceed with the test.

(6) The test subject shall be instructed to perform the exercises in section I. A. 14. of this appendix.

(7) After the test exercises, the test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried.

(b) Portacount Test Instrument.

(1) The Portacount will automatically stop and calculate the overall fit factor for the entire set of exercises. The overall fit factor is what counts. The Pass or Fail message will indicate whether or not the test was successful. If the test was a Pass, the fit test is over.

(2) Since the pass or fail criterion of the Portacount is user programmable, the test operator shall ensure that the pass or fail criterion meet the requirements for minimum respirator performance in this Appendix.

(3) A record of the test needs to be kept on file, assuming the fit test was successful. The record must contain the test subject's name; overall fit factor; make, model, style, and size of respirator used; and date tested.

Appendix D

RESPIRATOR FIT TEST CARD

UNC Charlotte Employee Fit Test Card (Respirator Use Certification Card)

UNC Charlotte – Student Health Center
Respirator Fit Test Date: **1/16/2013**
Name: **John Smith** ID#: **800000000**
Was successfully fit tested (QNFT) in:
Manuf.: **Kimberly Clark** Model: **46827** Size: **Small**
Fit Tester: Bruce B. Crowell
You must be fit tested annually and if you change to a different respirator model.
Conduct a user seal check each time used.

Appendix E

Voluntary N95 / N99 Respirator Usage – University Operations

Information for employees using N95 – N99 respirators in areas where they are not required but are voluntarily worn by the individual.

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 is 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 UNC - Charlotte provides N95 – N99 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. *Please note: that this document does NOT cover the usage of tight fitting half-face/full-face respiratory protection devices. These devices require respirator fit testing and are to be used in respirator required areas.*

You should do the following when using N95 – N99 respirators:

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

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

3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, an N95-N99 respirator is ONLY designed to filter dust particles. It will not protect you against vapors from evaporating solvents (gasoline, xylene, paint thinner, etc. although certain 3M N95 models will remove nuisance levels of solvent vapor) gases (carbon monoxide, argon, etc.) and acid vapors (sulfuric, nitric, etc.). Also, when working in environments that produce very small “sub micron” dust particles, such as when welding, an N95 (95% efficient) or N99 (99% efficient HEPA filter) rated respirator is recommended for use instead of a standard nuisance or medical/surgical mask due to increased filtration capability.

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

By signing below I acknowledge that I have read this document and I am aware of the requirements of wearing a N95/N99 respirator on a <u>voluntary</u> basis.

Name: _____ Signature _____

Date: _____ Department:_____

Please return signed copy to the EHS office --.

Revised 07/2014