

MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES

# Respiratory Protection Program

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Communicable Disease Division

November 2015



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## **Division of Communicable Disease**

### **Respiratory Protection Program**

#### **Purpose:**

This program is intended to protect staff from respiratory exposure to a biological agent in the event of an identified/potential risk.

#### **Responsibilities:**

The employer, the State of Michigan Department of and Health and Human Services, Division of Communicable Disease, will determine the need for respiratory protection, establish and maintain a Respiratory Protection Program in compliance with the requirements of 1910.134 of the Michigan Occupational Health Standard, and provide all personnel in the program with respirators appropriate to the intended purpose.

The employees will wear assigned respirators when and where they are required and in the manner in which they were trained, care for and maintain their respirators as instructed, store them in a clean and sanitary location, inform a supervisor if the respirator no longer fits well (and request a new respirator that fits properly), and inform a supervisor or program administrator of any respiratory hazards that are not adequately addressed in the workplace and/or any other concerns regarding the program. Additionally, when new employees are hired, or when newly assigned job duties require respiratory protection there will be additional responsibilities.

#### **Program Administrator:**

The program administrator will be the Communicable Disease Division Director.

#### **Duties of Administrator Include:**

Administration of the respiratory program, evaluation of effectiveness, development and maintenance of written standard operating procedures governing the selection and use of respirators. The administrator may designate other personnel, such as the Communicable Disease Infection Prevention Consultant, to carry out specific functions including but not limited to:

- Arrange for and/or conduct training
  - Training to include proper cleaning, storage, and maintenance of respiratory protection equipment
- Administer the medical surveillance program
- Conduct qualitative fit testing for respirators using either saccharine or Bitrex
  - Ensure that respirators fit well and do not cause discomfort
- Maintain records required by law

### **Respirator in Use:**

Staff deployed to the field are required to wear and use only NIOSH certified respirators and filters as part of their duties when indicated/required. The following respirator has been certified and will be utilized only in the proper environment\*:

N-95 filter masks (negative pressure, tight face fitting seal)

**\*Note: N-95 respirators shall not be used in atmospheres that are explosive nor flammable, or that has less than 19.5% oxygen content. Do not wear a respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.**

### **Requirements for Selection of N-95 Filter Masks:**

1. All staff, who as part of their job description may be deployed to the field and come in contact with persons that have, claim to have, or are suspected of having an infectious disease that is transmitted through airborne droplet nuclei, such as, but not limited to, TB or SARS (\*see list below) shall wear the N-95 mask.
2. The medical authority at the scene shall determine if the N-95 mask is sufficient to protect against the suspected agent.
3. Prior to use, a safe zone or area will be determined as an area of refuge should conditions change that make the use of the respirator unsafe.
4. Staff shall be trained in the proper use and care of this mask with annual review.
5. The respirator shall be worn the entire time that the employee is in a hazardous environment.

**\*Measles (rubeola virus), chickenpox (varicella virus), *M. tuberculosis*, smallpox, aerosolized *Bacillus anthracis* (anthrax), viral hemorrhagic fevers (i.e., Lassa, Ebola, Marburg, Crimean-Congo), avian influenza, monkeypox, SARS, MERS Co-V or any other new, emerging respiratory illness in situations when CDC/WHO has not issued recommendations for isolation and PPE.**

### **Medical Evaluation:**

1. Initial:

All staff who may be deployed to the field must complete a confidential medical questionnaire, Appendix A (taken from the MIOSHA Respirator Medical Evaluation

Questionnaire<sup>1</sup>), to determine the employee's physical ability to use the above listed respirators. This evaluation will be given to all new employees *before* respiratory fit testing can occur and deployment to hazardous scenes. Employees must complete the confidential medical questionnaire (short form) and place the completed form in a sealed envelope and deliver to Infection Prevention Consultant in the Communicable Disease Division at MDHHS. A physician or other licensed healthcare professional (PLHCP) will review the confidential questionnaire and determine the employees' medical ability to be fit tested and wear the respirator. The Infection Prevention Consultant will deliver sealed envelopes to the designated PLHCP for evaluation. The PLHCP will clear staff to be fit tested and wear a respirator. Follow-up medical examination may be required (i.e. further medical tests, consultations, or diagnostic procedures) to determine the medical capacity for the employee to use the respirators. The employee and PLHCP will arrange an appropriate time for any follow-up appointments. All of the above exams are paid for by MDHHS. The employee will be able to discuss the evaluation results with the PLHCP, if requested. Currently, Sparrow Occupational Health Clinic is the organization designated to evaluate the questionnaire and do follow up testing if needed. A list of all occupational health clinics designated by the Office of the State Employer can be found here: [http://www.michigan.gov/ose/0,1607,7-143-6097\\_6274---,00.html](http://www.michigan.gov/ose/0,1607,7-143-6097_6274---,00.html)

2. Continuing Evaluation:

Additional medical evaluations will be given when:

- a. An employee reports problems associated with using respirators, such as shortness of breath, dizziness, chest pains or wheezing.
- b. A physician or supervisor informs the administrator that an employee needs to be re-evaluated.
- c. A change occurs in the workplace that results in increased physical stress or burden on the employee.

**Fit Testing:**

1. N-95 Respirator Fit test:

- a. Each medically cleared employee needing respiratory protection will be issued a N-95 respirator. The respirator will be fit tested to the employee to make sure the employee receives the correct mask size, and that the

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<sup>1</sup> Appendix C of MIOSHA Standard- 1208.  
[http://www.michigan.gov/documents/CIS\\_WSH\\_part451\\_54075\\_7.pdf](http://www.michigan.gov/documents/CIS_WSH_part451_54075_7.pdf)

mask forms an air tight seal with the employee's face. The test will conform to MIOSHA Fit Testing Procedures<sup>2</sup>.

- b. Factors that may affect a correct mask fit are:
    - Significant weight change
    - Significant facial scarring in the area of the face piece seal
    - Major dental changes
    - Reconstructive or cosmetic facial surgery
    - Beards or facial hair that extends beyond the borders of the respirator on the face
    - Any other condition that would interfere with a proper fit
  - c. The employee will be fit tested with the same make, model, style and size of respirator that will be issued to them for use.
2. Trained MDHHS staff or other competent vendor will conduct the fit test using MI-OSHA accepted qualitative methods, and will complete the proficiency checklist found in Appendix B in this plan.
  3. Staff with facial hair that extends beyond the borders of the respirators on the face will not be fit tested and will be instructed to use the PAPR.

#### **Procedures for Proper N-95 Respirator Use, Cleaning and Storage:**

1. Staff will use their respirators under conditions specified by this program and in accordance with the training they receive on the use of each particular model. In addition, any respirator will not be used in a manner for which it is not certified by NIOSH or the manufacturer.
2. Procedures for applying the N-95 are found in Appendix C of this Plan.
3. All employees shall conduct user seal checks each time they apply their N-95 respirator in accordance with the manufacturer's recommendations or in compliance with MIOSHA User Seal Check Procedures<sup>3</sup>
4. Employees are not permitted to wear N-95 respirators if they have any condition such as facial scars, beards, or other facial hair or missing dentures that may prevent them from achieving a good seal.
5. Employees are not permitted to wear headphones, jewelry, or other articles that may interfere with the face piece-to-face seal.
6. These respirators are single use masks that are not to be shared or reused.
7. If breathing becomes difficult or the unit becomes saturated, damaged or soiled, leave the area immediately and replace the unit.

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<sup>2</sup> Appendix A of MIOSHA Standard- 1208  
[http://www.michigan.gov/documents/CIS\\_WSH\\_part451\\_54075\\_7.pdf](http://www.michigan.gov/documents/CIS_WSH_part451_54075_7.pdf)

<sup>3</sup> Appendix B-1 of MIOSHA Standard- 1208  
[http://www.michigan.gov/documents/CIS\\_WSH\\_part451\\_54075\\_7.pdf](http://www.michigan.gov/documents/CIS_WSH_part451_54075_7.pdf)

8. Unused respirators should be stored in a clean dry area, protected from contaminants.
9. Use Standard Precautions when disposing of used masks.

#### **N-95 Respirator Equipment Training:**

1. MDHHS or their designee shall provide training in the proper use and care of the respirator to those employees who are required to use them on the job. Each employee must be able to demonstrate knowledge of at least:
  - a. When the respirator is needed
  - b. How improper fit, usage, or maintenance can compromise the protectiveness of the unit
  - c. The capabilities and limitations of the respirator
  - d. How to efficiently use the respirator in emergency situations, including when the N-95 does not seal
  - e. How to inspect, put on, use and remove the respirator and check the face piece for a proper, tight fitting seal
  - f. How to clean and store respirators
  - g. The procedure for proper maintenance and/or disposal
  - h. General medical signs or symptoms that may limit or prevent the effective use of the respirator
2. Re-training shall be done at least annually, or when any of the following occur:
  - a. Changes in the workplace or a change in equipment makes previous training obsolete.
  - b. Inappropriate use of the respirator equipment indicates an employee has not retained the required understanding or skill to safely use the equipment.
  - c. Any situation that requires retraining to ensure safe respirator use.

#### **Voluntary Use of Respirators by Employees:**

Employees who wish to voluntarily deploy to situations in which a respirator may be needed shall adhere to this policy and its entire requirement for, but not limited to, medical evaluation, fit testing, training and annual training.

#### **Evaluation of the Respiratory Program:**

1. Each year the administrator shall review the Respiratory Protection Program. All employees who wear or service N-95 respirators and/or their supervisors shall be asked to provide information on:
  - a. The adequacy of the respiratory equipment being used.

- b. Knowledge of accidents or incidents where the N-95 respirator failed to provide adequate protection.
  - c. Adequacy of training in the use of, and maintenance of the N-95 respirator equipment.
2. The Administrator shall make recommendations on changes or improvements needed in this program and provide additional and/or refresher training annually.

**Record Keeping:**

As part of this Respiratory Protection Program, the Administrator shall keep records regarding employee fit testing results. All documentation is kept in a confidential, locked file on the locked floor of the Communicable Disease Division. The Infection Prevention Consultant shall keep employee training records and the schedule.

Review Date and Signature: \_\_\_\_\_  
\_\_\_\_\_



## **Appendix A- Respirator Medical Evaluation Questionnaire (Mandatory)**

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

To the employee:

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: \_\_\_\_\_

3. Your age (to nearest year): \_\_\_\_\_

4. Sex (circle one): Male/Female

5. Your height: \_\_\_\_\_ ft. \_\_\_\_\_ in.

6. Your weight: \_\_\_\_\_ lbs.

7. Your job title: \_\_\_\_\_

8. A phone number where you can be reached by the health care professional who reviews this questionnaire (include the Area Code): \_\_\_\_\_

9. The best time to phone you at this number: \_\_\_\_\_

10. Has your employer told you how to contact the health care professional who will review this questionnaire (circle one): Yes/No

11. Check the type of respirator you will use (you can check more than one category):
- a. \_\_\_\_\_ N, R, or P disposable respirator (filter-mask, non-cartridge type only).
  - b. \_\_\_\_\_ Other type (for example, half- or full-face piece 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 below must be answered by every employee who has been selected to use any type of respirator (please circle "yes" or "no").**

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

2. Have you *ever had* any of the following conditions?

- a. Seizures: Yes/No
- b. Diabetes (sugar disease): Yes/No
- c. Allergic reactions that interfere with your breathing: Yes/No
- d. Claustrophobia (fear of closed-in places): Yes/No
- e. Trouble smelling odors: Yes/No

3. Have you *ever had* any of the following pulmonary or lung problems?

- a. Asbestosis: Yes/No
- b. Asthma: Yes/No
- c. Chronic bronchitis: Yes/No
- d. Emphysema: Yes/No
- e. Pneumonia: Yes/No
- f. Tuberculosis: Yes/No
- g. Silicosis: Yes/No
- h. Pneumothorax (collapsed lung): Yes/No
- i. Lung cancer: Yes/No
- j. Broken ribs: Yes/No
- k. Any chest injuries or surgeries: Yes/No
- l. Any other lung problem that you've been told about: Yes/No

4. Do you *currently* have any of the following symptoms of pulmonary or lung illness?

- a. Shortness of breath: Yes/No
- b. Shortness of breath when walking fast on level ground or walking up a slight hill or incline:  
Yes/No
- c. Shortness of breath when walking with other people at an ordinary pace on level ground:  
Yes/No
- d. Have to stop for breath when walking at your own pace on level ground:  
Yes/No
- e. Shortness of breath when washing or dressing yourself: Yes/No
- f. Shortness of breath that interferes with your job: Yes/No
- g. Coughing that produces phlegm (thick sputum): Yes/No
- h. Coughing that wakes you early in the morning: Yes/No
- i. Coughing that occurs mostly when you are lying down: Yes/No
- j. Coughing up blood in the last month: Yes/No
- k. Wheezing: Yes/No
- l. Wheezing that interferes with your job: Yes/No
- m. Chest pain when you breathe deeply: Yes/No
- n. Any other symptoms that you think may be related to lung problems: Yes/No

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

- a. Heart attack: Yes/No
- b. Stroke: Yes/No
- c. Angina: Yes/No
- d. Heart failure: Yes/No
- e. Swelling in your legs or feet (not caused by walking): Yes/No
- f. Heart arrhythmia (heart beating irregularly): Yes/No
- g. High blood pressure: Yes/No
- h. Any other heart problem that you've been told about: Yes/No

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

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

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

- a. Breathing or lung problems: Yes/No
- b. Heart trouble: Yes/No
- c. Blood pressure: Yes/No
- d. Seizures: Yes/No

8. If you've used a respirator, have you *ever had* any of the following problems? (If you've never used a respirator, check the following box  and go to question 9:)

- a. Eye irritation: Yes/No
- b. Skin allergies or rashes: Yes/No
- c. Anxiety: Yes/No
- d. General weakness or fatigue: Yes/No
- e. Any other problem that interferes with your use of a respirator: Yes/No

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

## Appendix B- Proficiency Checklist

EMPLOYEE: \_\_\_\_\_

RESPIRATOR: \_\_\_\_\_ SIZE: \_\_\_\_\_

- |   |     |    |
|---|-----|----|
| 1. Selected proper face piece                     | Yes | No |
| 2. Attained complete seal                         | Yes | No |
| 3. Conducted negative pressure test               | Yes | No |
| 4. Is aware of sensory indicators for exposure    | Yes | No |
| 5. Conducted a fit test with Saccharine or Bitrex | Yes | No |

PASSED

FAILED

\_\_\_\_\_  
Signature of Trainer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name

## **Appendix C- N-95 Fitting Instructions**

### **For N-95 3M Models 8110S, 8210, 8260, and 8260S**

Cup the respirator in your hand, with the nosepiece at your fingertips, allowing the headbands to hang freely below your hand.

Position the respirator under your chin with the nosepiece up. Pull the top strap over your head resting it high at the top back of your head. Pull the bottom strap over your head and position it around the neck, below the ears.

Place your fingertips from both hands at the top of the metal nosepiece. Using two hands mold the nose area to the shape of your nose by pushing inward while moving your fingertips down both sides of the nosepiece. NOTE: pinching the nosepiece using one hand may result in improper fit and less effective respirator performance. Use two hands.

Perform a User Seal Check prior to each wearing.

Place both hands completely over the respirator and exhale. Being careful not to disturb the position of the respirator.

If air leaks around the nose, readjust the nosepiece as described in Step 3.

If air leaks at the respirator edges, work the straps back along the sides of your head.

**IF YOU CANNOT ACHIEVE A PROPER FIT, DO NOT ENTER THE HAZARDOUS AREA. SEE YOUR SUPERVISOR.**

### **For Kimberly Clark TECHNOL FLUIDSHIELD PFR95 Sizes Regular and Small**

Wear orange side out

Separate the edges of the respirator to fully open

Slightly bend the nose wire to form a gentle curve

Hold the respirator upside down to expose the two headbands

Using index fingers and thumbs, separate the two headbands

While holding the headbands index fingers and thumbs, cup the respirator under your chin

Pull the headbands up and over the head

Release the lower headband from thumbs and position it at the base of neck

Position the remaining headband on the crown of the head

Conform the nosepiece across the bridge of the nose by firmly pressing down with fingers

Continue to adjust the respirator and secure the edges until a good facial fit is achieved

Perform a Fit Check

Place both hands completely over the respirator and exhale

Be careful not to disturb the position of the respirator

If air leaks around the nose, readjust the nosepiece as described in Step 10

If air leaks at the respirator edges, work the straps back along the sides of the head

**IF YOU CANNOT ACHIEVE A PROPER FIT, DO NOT ENTER THE HAZARDOUS AREA. SEE YOUR SUPERVISOR.**