



## COUNTY BOARD OF HEALTH 2022 RESPIRATORY PROTECTION PROGRAM

### 1.0 PURPOSE

The purpose of this program is to ensure that all District 2 Public Health (D2PH) employees that are required to wear respiratory protection as a condition of their employment are protected from respiratory hazards through the proper use of respirators.

### 2.0 PROGRAM COMPONENTS

- Program Administration
- Program Scope and Application
- Roles and Responsibilities
- Medical Evaluation
- Fit Testing Documentation and Record Keeping
- Proper Respirator Use
- Fit Testing Procedures
- Attachments
  - Attachment 1: Fit Testing Medical Evaluation Questionnaire
  - Attachment 2: Fit Testing Medical Consultation Algorithm
  - Attachment 3: Employee Refusal of Medical Evaluation for Fit Testing
  - Attachment 4: Qualitative Fit Test (QLFT) Form

### 3.0 PROGRAM ADMINISTRATION

- 3.1 The Tuberculosis (TB) Program Coordinator and the District Nursing Director will be responsible for monitoring the ongoing and changing needs for respiratory protection.
- 3.1.1 This program will be reviewed on an annual basis as a part of the larger D2PH Standard Precautions and Bloodborne Pathogen Occupational Exposure Control policy.
- 3.2 The TB Program Coordinator will be responsible for the administration of the Respiratory Protection Program and thus is called the Respiratory Program Administrator (RPA).

<b>COUNTY BOARD OF HEALTH PROCEDURES</b>	<b>Revised</b>	01/2022
<b>Respiratory Protection Program</b>	<b>Page No.</b>	2 of 9

**3.2.1** The TB Program Coordinator is responsible for training of District Staff that will be required to conduct fit testing for their employees.

**3.3** The District Nursing Director will be responsible for ensuring that appropriate staff in each Health Department are fit tested.

#### **4.0 PROGRAM SCOPE AND APPLICATION**

This program applies to all employees who could potentially be exposed to airborne respiratory illnesses during normal work operations, and during non-routine or emergency situations. Some of the types of work activities in which employees would be required to wear respirators include working within Infectious Disease Departments, Environmental Health Departments, congregate shelters where an infectious disease may be present, or at public health points of dispensing (POD) where medical countermeasures (MCM) are being dispensed in response to an infectious disease outbreak or biological agent release.

#### **5.0 ROLES AND RESPONSIBILITIES**

##### **5.1 Respiratory Program Administrator (RPA)**

The RPA is responsible for administering the Respiratory Protection Program

##### **5.1.1 Duties of the RPA include**

- Identify work areas, processes, or tasks that require respiratory protection
- Monitor OSHA policy and standards for changes and make changes to agency's policy
- Select respiratory protection products
- Monitor respirator use to ensure they are used in accordance with their certification
- Distribute and evaluate education/medical questionnaire
- Evaluate any feedback information or surveys
- Arrange for and/or conduct training and fit testing
- Ensure proper storage and maintenance of respiratory protection equipment.

##### **5.2 County Nurse Manager (CNM)**

**5.2.1** CNMs are responsible for ensuring that the Respiratory Protection Program is implemented in their health departments.

<b>COUNTY BOARD OF HEALTH PROCEDURES</b>	<b>Revised</b>	01/2022
<b>Respiratory Protection Program</b>	<b>Page No.</b>	3 of 9

**5.2.2** In addition to being knowledgeable about the program requirements for their own protection, CNMs must also ensure that the program is understood and followed by the employees under their charge.

**5.2.3** Duties of the CNM include:

- Knowing the hazards in the areas in which they work
- Knowing types of respirators that need to be used
- Ensuring the respiratory protection program and worksite procedures are followed
- Enforcing/encouraging staff to use required respirators
- Ensuring employees receive training and medical evaluations
- Coordinating ongoing retraining and/or fit testing of staff
- Notifying RPA with any problems with respirator use, or changes in work processes that would impact airborne contaminant levels
- Ensure proper storage and maintenance of all respirators.

### **5.3 Employee**

**5.3.1** Duties of the employee include:

- Participate in all training
- Wear respirator when indicated
- Maintain equipment
- Report malfunctions or concerns.

## **6.0 MEDICAL EVALUATION**

**6.1** Employees assigned to tasks that require respiratory protection must be physically able to perform the tasks while wearing a respirator. As part of the fit testing process, all employees will be required to complete a Fit Testing Medical Evaluation Questionnaire (*Attachment 1*). If indicated, as denoted in the Fit Testing Medical Consultation Algorithm (*Attachment 2*), employees will need to be evaluated by the District Health Director prior to fit testing being approved.

<b>COUNTY BOARD OF HEALTH PROCEDURES</b>	<b>Revised</b>	<b>01/2022</b>
<b>Respiratory Protection Program</b>	<b>Page No.</b>	<b>4 of 9</b>

**6.2** For all D2PH employees, the District Health Director will determine individual medical clearance. Employees refusing a medical evaluation will not be allowed to work in conditions requiring respirator use. The employee refusal must be documented on the Employee Refusal of Medical Evaluation for Fit Testing (*Attachment 3*).

**6.3** Re-evaluation will be conducted under these circumstances:

- Employee reports physical symptoms that are related to the ability to use a respirator (wheezing, shortness of breath, chest pain, etc.).
- It is identified that an employee is having a medical problem during respirator use.
- The healthcare professional performing the evaluation determines an employee needs to be re-evaluated and the frequency of the evaluation.
- A change occurs in the workplace conditions that may result in an increased physiological burden on the employee.
- Employee facial size/shape/structure has changed significantly.

## **7.0 FIT TESTING DOCUMENTATION AND RECORD KEEPING**

### **7.1 Fit Testing Medical Evaluation Questionnaire (*Attachment 1*)**

Employees are required to complete and note any significant medical history that impacts fit testing. This form must be kept as a part of the employee's health file maintained at their work location. A copy must also be returned to the RPA and placed in the employee's Health File in Human Resources.

### **7.2 Fit Testing Medical Consultation Algorithm (*Attachment 2*)**

Guide used by the fit tester to determine when to refer an employee to the RPA to facilitate medical evaluation.

### **7.3 Employee Refusal of Medical Evaluation for Fit Testing (*Attachment 3*)**

Must be completed by employee if he/she declines further evaluation indicated by Fit Testing Medical Consultation Algorithm or after failing the fit test. Further communication through the Human Resources department may be needed to determine if employee can continue in current role.

### **7.4 Qualitative Fit Test (QLFT) Form (*Attachment 4*)**

Used by the person performing the fit test. This form must be kept as a part of the employee's health file maintained at their work location. A copy must also be returned to the RPA and placed in the employee's Health File in Human Resources.

<b>COUNTY BOARD OF HEALTH PROCEDURES</b>	<b>Revised</b>	01/2022
<b>Respiratory Protection Program</b>	<b>Page No.</b>	5 of 9

## **8.0 PROPER RESPIRATOR USE**

- 8.1** Employees will use their respirators under conditions specified by this program, and in accordance with the training they receive on the use of the selected model(s). In addition, the respirator shall not be used in a manner for which it is not certified by the National Institute for Occupational Safety and Health (NIOSH) or by its manufacturer.
- 8.2** All employees shall conduct positive and negative pressure user seal checks each time they wear a respirator.
- 8.3** All employees shall leave a potentially contaminated work area to change their respirator if the respirator is impeding their ability to work.

## **9.0 FIT TESTING PROCEDURES**

- 9.1** The following fit testing procedures will be followed by all D2PH employees performing fit testing on D2PH staff in accordance with the Respiratory Protection Program. Only certified fit testers are to perform fit testing. The RPA will maintain a list of all certified fit testers. Fit testers must be able to prepare test solutions, calibrate equipment, perform tests properly, and recognize invalid tests. Fit testers shall ensure that equipment is kept clean and well maintained so as to operate within the parameters for which it was designed.
- 9.2** Fit testing is performed to determine if an employee can maintain an acceptable respiratory fit and seal. Fit testing will be administered using an OSHA-accepted qualitative fit test protocol, such as the Bitrex™ (Denatonium benzoate) or Saccharin (sweet) solution aerosol protocol. Employees must be tested with the same make, model, style, and size of respirator that will be used during work operations.
- 9.3 Pre-Fit Testing Procedures**
  - 9.3.1** Test subject(s) 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.
  - 9.3.2** 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.
  - 9.3.3** The test subject shall be allowed to pick the most acceptable respirator from a number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user. 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. As demonstrated by the instructor, the test subject will set strap tension and position on the face to determine an acceptable fit.

<b>COUNTY BOARD OF HEALTH PROCEDURES</b>	<b>Revised</b>	01/2022
<b>Respiratory Protection Program</b>	<b>Page No.</b>	6 of 9

**9.3.4** The most comfortable mask is donned and worn for at least five minutes to assess for comfort. Assistance in assessing comfort can be given by discussing the points in item 9.3.5. If the test subject is not familiar with using a particular respirator, he/she shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on straps.

**9.3.5** 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:

- Position of mask on the nose
- Room for eye protection
- Room to talk
- Position of mask on face and cheeks

**9.3.6** The following criteria shall be used to help determine the adequacy of the respirator fit:

- Proper placement on chin
- Adequate strap tension; not overly tightened
- Fit across nose bridge
- Respirator of proper size to span distance from nose to chin
- Tendency of respirator to slip
- Self-observation in mirror to evaluate fit and respirator position

**9.3.7** 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. The test subject shall conduct negative and positive pressure user seal checks. Another respirator shall be selected and retested if the subject fails the user seal check.

**9.3.8** The test shall not be conducted if there is any hair growth between the skin and the respirator 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.

**9.3.9** If a test subject exhibits difficulty in breathing during the tests, he/she shall be referred to the District Health Director or other licensed health care professional, in accordance with the D2PH Respiratory Protection Program, to determine whether the test subject can wear a respirator while performing his/her duties.

<b>COUNTY BOARD OF HEALTH PROCEDURES</b>	<b>Revised</b>	01/2022
<b>Respiratory Protection Program</b>	<b>Page No.</b>	7 of 9

**9.3.10** If at any time the test subject finds the fit of the respirator unacceptable, he/she shall be given the opportunity to select a different respirator and to be retested.

**9.3.11** Prior to the commencement of the fit test, the test subject shall be given a description of the entire sensitivity test and fit test procedure 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. The test subject should not eat, drink (except plain water), or chew gum for at least 15 minutes before the test.

#### **9.4 Sensitivity Test Procedures**

**9.4.1** The sensitivity test, performed *without wearing a respirator*, is intended to determine whether the test subject can detect the bitter or sweet taste of the test solution at very low levels. The sensitivity test solution is a diluted mixture of fit test solution.

**9.4.2** The test subject shall don the hood and position it forward so there is about 6 inches between the subject's face and the window. Throughout the sensitivity test, the test subject shall breathe through his/her slightly open mouth with tongue extended. The subject is instructed to report when he/she detects a bitter/sweet taste.

**9.4.3** Using the sensitivity test nebulizer #1 (with Bitrex or Saccharin/sweet sensitivity solution #1), the fit tester shall spray the aerosol into the hood through the hole in the window. The nebulizer nozzle is directed away from the nose and mouth of the test subject. 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.

**9.4.4** An initial 10 squeezes of the nebulizer bulb are performed rapidly, then the test subject is asked whether the bitter/sweet taste can be detected. If the test subject reports tasting the bitter/sweet taste during the 10 squeezes, the sensitivity test is completed. *The taste threshold is noted as 10 regardless of the number of squeezes actually completed.*

**9.4.5** If the first response is negative, 10 more squeezes are repeated rapidly and the test subject is again asked whether the bitter/sweet taste can be detected. If the test subject reports tasting the bitter/sweet taste during the second 10 squeezes, the sensitivity test is completed. *The taste threshold is noted as 20 regardless of the number of squeezes actually completed.*

**9.4.6** If the second response is negative, 10 more squeezes are repeated rapidly and the test subject is again asked whether the bitter/sweet taste can be detected. If the test subject reports tasting the bitter/sweet taste during the third set of 10 squeezes, the screening test is completed. *The taste threshold is noted as 30 regardless of the number of squeezes actually completed.*

<b>COUNTY BOARD OF HEALTH PROCEDURES</b>	<b>Revised</b>	01/2022
<b>Respiratory Protection Program</b>	<b>Page No.</b>	8 of 9

**9.4.7** If the Bitrex or Saccharin is not tasted after 30 squeezes (step 9.4.6), the test subject is unable to taste the testing medium and may not perform the fit test with that testing medium. The sensitivity test (steps 9.4.1- 9.4.6) shall be repeated with a different testing medium (e.g., if the test subject is unable to taste Bitrex, the sensitivity test shall be repeated with Saccharin/sweet sensitivity test solution).

**9.4.8** Remove the hood and give the test subject a few minutes to clear the taste from his/her mouth.

## **9.5 Fit Test Procedures**

**9.5.1** The test subject shall don the selected respirator and conduct a user seal check. Instruct the test subject to don the hood and position it as before, and to breathe through their mouth for the duration of the fit test.

**9.5.2** Using the fit test nebulizer #2 (with Bitrex or Saccharin/sweet fit test solution #2), the fit tester shall spray the aerosol into the hood through the hole in the window, using the same number of squeezes (10, 20, or 30) required to elicit a taste response during the sensitivity test.

**9.5.3** Every 30 seconds, the aerosol concentration within the hood shall be replenished using one-half the number of squeezes used in step #2 above (e.g., 5, 10, or 15).

**9.5.4** Instruct the test subject to indicate if they detect the bitter/sweet taste at any time during the test.

**9.5.5** After the initial aerosol is injected into the hood, instruct the test subject to perform the following exercises for 60 seconds each:

- Normal breathing
- Deep breathing
- Turning head from side to side
- Moving head up and down
- Talking—the test subject can read from a prepared text such as “The Rainbow Passage” below, or count backward from 100
- Bending over—the test subject shall bend at the waist as if he/she were to touch his/her toes
- Normal breathing

**9.5.6** The test subject shall be questioned by the fit tester regarding the comfort of the respirator upon completion of the exercises. If it has become unacceptable, another



<b>COUNTY BOARD OF HEALTH PROCEDURES</b>	<b>Revised</b>	<b>01/2022</b>
<b>Respiratory Protection Program</b>	<b>Page No.</b>	<b>9 of 9</b>

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.

- 9.5.7** If the entire test is completed without the test subject detecting the bitter/sweet taste of the fit test solution aerosol, the test is passed and the respirator fit is deemed adequate.
- 9.5.8** If at any point the bitter/sweet taste is detected, the respirator fit is deemed unsatisfactory and the test is failed. A different respirator shall be tried and the entire fit test procedure (steps 9.5.1 – 9.5.7) is repeated. The fit tester must allow at least 10 minutes for the test subject’s taste sensitivity to clear before repeating the entire procedure.

**“The Rainbow Passage”**

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



## FIT TESTING MEDICAL EVALUATION QUESTIONNAIRE

You will be allowed to answer this questionnaire during normal working hours prior to your fit testing. This questionnaire will only be utilized to determine if you are able to be fit tested in accordance with the protocol. A copy of this questionnaire will be maintained as part of your Fit Test File at your work location and in your Employee Health file in Human Resources.

**Section 1:** The following information must be provided by every employee who has been selected to use any type of respirator.

Date \_\_\_\_\_ Name \_\_\_\_\_  
D.O.B \_\_\_\_\_ Gender \_\_\_\_\_ Height \_\_\_\_\_ Weight \_\_\_\_\_  
Job Title \_\_\_\_\_ Work Location \_\_\_\_\_  
Phone Number \_\_\_\_\_ Email \_\_\_\_\_  
The best time to reach you at this number \_\_\_\_\_ AM PM  
Have you ever worn a respirator? Yes No If yes, what type(s) \_\_\_\_\_

**Section 2:** Questions 1- 5 below must be answered by every employee who has been selected to use any type of respirator.

1. Do you currently smoke tobacco or have you smoked tobacco in the last month? Yes No
2. Have you ever had problems smelling odors? Yes No
3. Please list all medical conditions with which you have been diagnosed by a licensed medical professional: \_\_\_\_\_  
\_\_\_\_\_
4. If you've used a respirator, have you ever had any of the following problems? (circle answers)  
*If you've never used a respirator, check here  and go on to question 5.*
  - 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
5. Would you like to talk with the medical provider who will review this questionnaire about your answers to this questionnaire? Yes No

If you have questions about respirator use, workplace hazards, or fit testing, contact Melinda Dolphyn, Respiratory Program Administrator, at 770-718-5084.

Employee Signature \_\_\_\_\_

Date \_\_\_\_\_

**For Fit Tester and District Health Director Use Only**

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- Cleared to use N95 respirator on \_\_\_\_\_
  
- Consult with District Health Director required (*see Fit Testing Medical Consultation Algorithm for guidance*)
  - Date of consult: \_\_\_\_\_
  - Reason for consult: \_\_\_\_\_
  - Cleared for use of N95 respirator following consult on \_\_\_\_\_
  
- Referral to Provider for medical evaluation prior to clearance
  - Date evaluated by Medical Provider: \_\_\_\_\_
  - Provider: \_\_\_\_\_
  - Medically cleared to use N95 respirator by Provider with restrictions as indicated:  
\_\_\_\_\_
  
- Not cleared for N95 use

District 2 Fit Tester: \_\_\_\_\_ Date \_\_\_\_\_  
(Print/Signature)

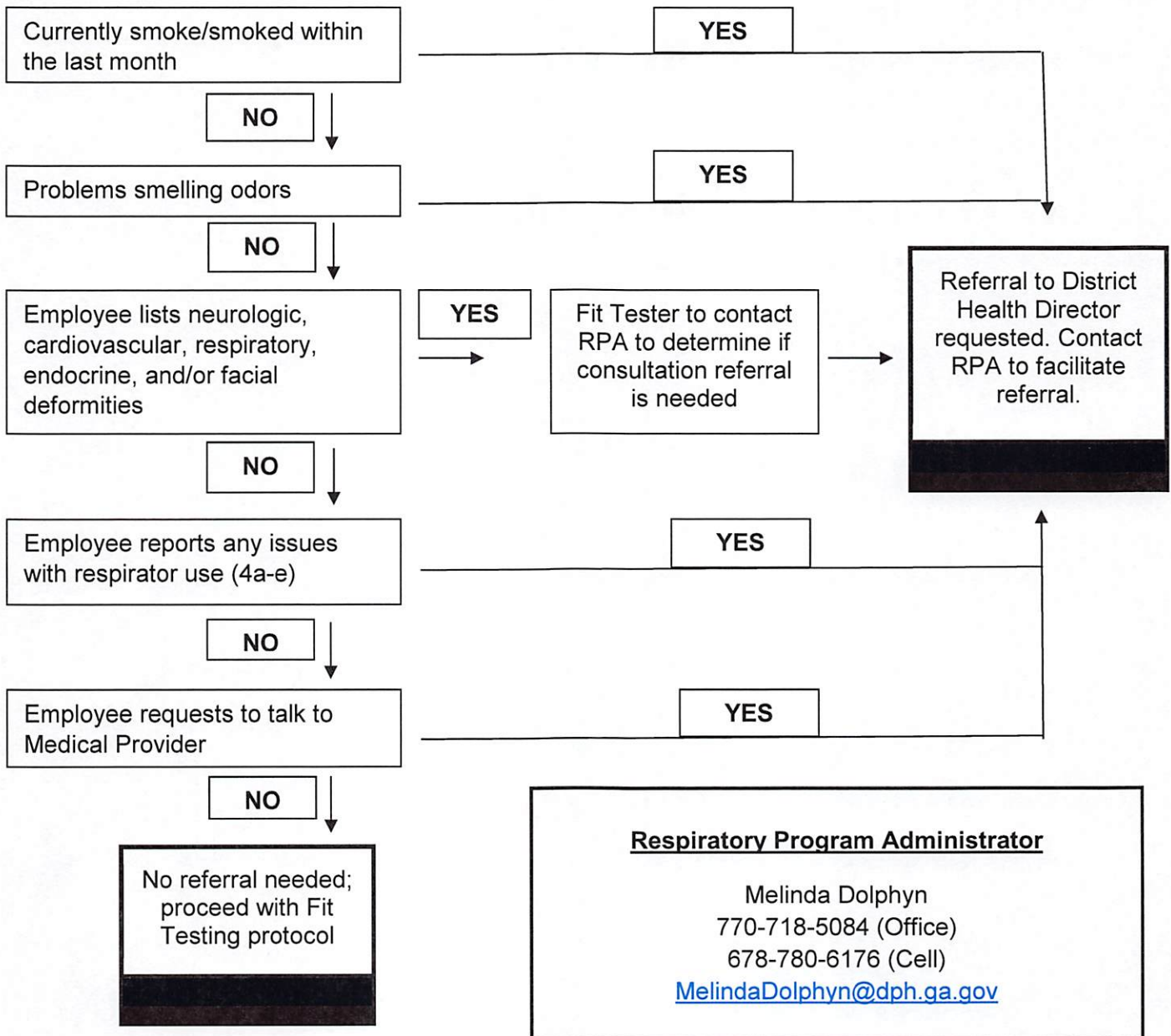
Medical Provider \_\_\_\_\_ Date \_\_\_\_\_  
(Print/Signature)



## FIT TESTING MEDICAL CONSULTATION ALGORITHM

This algorithm is to be used in conjunction with the Fit Testing Medical Evaluation Questionnaire as a tool to determine when consultation or medical evaluation is needed prior to clearance of a District 2 Public Health employee to be fit tested and wear an N95 respirator.

Refer to the employee's answers in Section 2 of the Fit Testing Medical Evaluation Questionnaire to follow the process.





## EMPLOYEE REFUSAL OF MEDICAL EVALUATION FOR FIT TESTING

I understand that, in accordance with the District 2 Respiratory Protection Program, it has been recommended that I be medically evaluated to determine my ability to be Fit Tested and wear an approved N95 respirator to perform job functionality. I have been given the opportunity to be evaluated at no charge to me. However, I decline medical evaluation.

I understand that by declining this evaluation, I will not be allowed to perform any job functionality that requires me to wear an approved and tested N95 respirator. I also understand that if wearing such a respirator is a requirement of my job functionality, further communication through the Human Resources department may be needed to determine my ability to continue in my current role.

**I decline medical evaluation for Fit Testing at this time.**

\_\_\_\_\_  
Employee Name (Print)

\_\_\_\_\_  
Employee Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Fit Tester (Name / Signature)

\_\_\_\_\_  
Date

*I understand that I may rescind this declination at any point and be evaluated in accordance with the Respiratory Protection Program.*

**I rescind my declination and wish to be evaluated for Fit Testing.**

\_\_\_\_\_  
Employee Name (Print)

\_\_\_\_\_  
Employee Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Fit Tester (Name / Signature)

\_\_\_\_\_  
Date



## QUALITATIVE FIT TEST FORM (QLFT)

A respirator fit test must be completed by an individual trained in respiratory fit testing procedures.  
**This fit test is required annually for tuberculosis staff and every 3 years for other staff.**

<b>Employee Name</b>	<b>Date of Birth</b>	<b>Height</b>	<b>Weight</b>
<b>Health Department</b>	<b>Department</b>	<b>Supervisor Name</b>	

Does the employee wear glasses?      YES    NO

Does the employee have facial hair, dentures, or other attributes that will prevent a proper respirator fit?    YES    NO

Respirator Type (Make, Model, and Certification Number) \_\_\_\_\_

Testing Media \_\_\_\_\_

	<i>TEST 1</i>	<i>TEST 2</i>	<i>TEST 3</i>
Respirator Type Compatible with Glasses?	PASS__ FAIL__	PASS__ FAIL__	PASS__ FAIL__
Positive Pressure Check	PASS__ FAIL__	PASS__ FAIL__	PASS__ FAIL__
Negative Pressure Check	PASS__ FAIL__	PASS__ FAIL__	PASS__ FAIL__
Head Stationary Normal Breathing	PASS__ FAIL__	PASS__ FAIL__	PASS__ FAIL__
Head Stationary Deep Breathing	PASS__ FAIL__	PASS__ FAIL__	PASS__ FAIL__
Head Turning Side to Side	PASS__ FAIL__	PASS__ FAIL__	PASS__ FAIL__
Head Moving Up and Down	PASS__ FAIL__	PASS__ FAIL__	PASS__ FAIL__
Talking (Recite Passage or Count Backwards)	PASS__ FAIL__	PASS__ FAIL__	PASS__ FAIL__
Bending Over	PASS__ FAIL__	PASS__ FAIL__	PASS__ FAIL__
Head Stationary Normal Breathing	PASS__ FAIL__	PASS__ FAIL__	PASS__ FAIL__
Respirator Fit Test Results	PASS__ FAIL__	PASS__ FAIL__	PASS__ FAIL__

Based on information provided on this form, I certify that the employee named on this form can wear the respiratory protective equipment listed above.

Name / Signature of Person Administering Test \_\_\_\_\_

Date \_\_\_\_\_