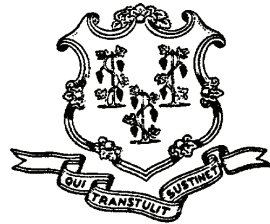


**State of Connecticut  
Department of Public Health**

**Division of Environmental Health  
Lead Poisoning Prevention and Prevention Control Program**



**RESPIRATORY PROTECTION  
PLAN**

Draft revision April 2008

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## **1.0 Purpose:**

Respiratory Protection is of primary importance if there is a possibility that a work site atmosphere contains a hazardous air contaminant and/or an oxygen deficient atmosphere. Either situation may lead to serious injury, illness or even death. In order to properly recognize respiratory hazards employees need to be thoroughly trained.

The purpose of this written program is two-fold:

1. To ensure that Connecticut Department of Public Health (DPH), Lead Poisoning Prevention and Control Program (LPPCP) employees are protected from exposure to any respiratory hazards, in particular those that are related to airborne lead hazards, and
2. To achieve compliance with all applicable regulations governing respiratory protection.

Engineering controls implemented by contractors who are being inspected, such as negative pressure ventilation, are not always effective in reducing respiratory hazards below OSHA requirements. In these situations, respirators and other protective equipment must be used.

The DPH has determined that employees (Supervising Environmental Sanitarians and Environmental Sanitarians 1 & 2) working in the LPPCP may potentially be exposed to lead-based paint dust and asbestos fibers during the course of a field inspection of an active lead abatement or renovation project. Lead abatement or renovation results in the disturbance of surfaces that may contain toxic levels of lead-based paint. Such disturbance may include associated activities such as preparation and clean-up. These activities may release variable concentrations of lead dust into confined areas within a dwelling depending on the abatement methodology or activity being performed. These exposures have not represented Immediately Dangerous to Life or Health (IDLH) conditions in the past, and are not expected to in the future. However it shall be the policy of the LPPCP that no member of the staff will enter into an active lead abatement project or renovation project suspected of disturbing lead paint work area unless wearing the proper respirator (Powered Air Purifying Respirator [PAPR]). This shall apply to situations where the airborne concentration of lead is unknown or greater than the Permissible Exposure Limit of 50 micrograms per cubic meter. Additionally, no LPPCP staff member will enter into a confined space as defined in OSHA standard 1910.146

The work sites that require respirator use by DPH/ LPPCP employees are outlined in Table 1 in Section 2.0 of this document.

In addition, if employees express a desire to wear respirators during operations such as renovations that may not legally require respiratory protection, the DPH/ LPPCP will review each request. If the use of respiratory protection in a specific case will not jeopardize the health or safety of the employee(s), the DPH/ LPPCP will provide respirators for voluntary use. As outlined in the Scope and Application section of this program, voluntary respirator use is subject to the requirements of this program.

## **2.0 Scope and Application**

This program applies to all DPH/ LPPCP employees who are required to wear respirators during field inspections of active lead abatement projects. All affected employees (as outlined in the table below) must be enrolled in the company's respiratory protection program (RPP). In addition, any employee who voluntarily wears a respirator when a respirator is not legally required will also be enrolled in the RPP. Employees participating in the respiratory protection program do so at no cost to themselves. The expense associated with training, medical evaluations and provision of respiratory protection equipment will be borne by the DPH.

**TABLE 1: RESPIRATOR USE AT DPH/LEMU:**

Respirator	Process (At Active lead Abatement Worksite)
Filtering facepiece (dust mask)	NOT ALLOWED
Full facepiece PAPR	During the inspection of facilities following the disturbance of lead-based paint surfaces where exposure may be encountered
Full facepiece PAPR	Abatement oversight inspection during preparation, active abatement, and/or clean-up activities

### **3.0 Responsibilities:**

#### **A. Program Administrator:**

The Program Administrator is responsible for administering the respiratory protection program. Duties of the program administrator include:

- 1) Assist field personnel to identify work areas or tasks that require workers to wear respirators.
- 2) Selection of respiratory protection options, equipment, filters other protective items such as gloves.
- 3) Reviewing respirator use to ensure that respirators are used in accordance with their certifications.
- 4) Arranging or conducting training as required by OSHA.
- 5) Reviewing and ensuring the proper storage and maintenance of respiratory protection equipment.
- 6) Maintaining basic data from the medical surveillance program.
- 7) Maintaining records required by the program.
- 8) Maintaining and updating the written program.
- 9) Evaluating the program.

The LPPCP Respirator Program Administrator is \_\_\_\_\_

#### **B. Supervisors:**

Supervisors are responsible for ensuring that the respiratory protection program is implemented in their particular areas. In addition to being knowledgeable about the program requirements for their own protection, supervisors must also ensure that the program is understood and followed by the employees under their charge. Duties of the supervisor include:

- Ensuring that employees under their supervision (including new hires) have received appropriate training, fit testing, and annual medical evaluation.
- Ensuring the availability of appropriate respirators and accessories.

- Being aware of tasks requiring use of respiratory protection.
- Enforcing the proper use of respiratory protection when necessary.
- Ensuring that respirators are properly cleaned, maintained, and stored according to the respiratory protection plan.
- Ensuring that respirators fit well and do not cause undue discomfort.
- Continually monitoring work operations to identify respiratory hazards.
- Coordinating with the Program Administrator on how to address respiratory hazards or other concerns regarding the program.

### C. Employees:

Each employee has the responsibility to wear his or her respirator when required and in the manner in which they were trained. Employees must also:

- 1) Care for and maintain their respirators as instructed, and store them in a clean sanitary location.
- 2) Inform the Program Administrator if their respirator no longer fits well.
- 3) Inform the Program Administrator of any respiratory hazards they feel are not adequately addressed and of any other concerns they have regarding the program.

## 4.0 Program Elements:

### A. Selection Procedures:

The Program Administrator will select respirators to be used based on the hazards to which workers may be exposed. Respirators will be selected in accordance with OSHA standards. The Program Administrator will conduct a hazard evaluation for each operation, process, or work area where airborne contaminants may be present in non-routine operations. The hazard evaluation will include:

- Identification and development of a list of hazardous substances to which field personnel may be exposed.
- Since the work locations and activities where potential exposures to lead-based paint and asbestos can vary widely, the Program Administrator will conservatively select respirator protection for employees. **The mandatory respirator to be used by the DPH/ LPPCP personnel shall be the Powered Air Purifying Respirator (PAPR).**
- Exposure monitoring to quantify non-routine/routine hazardous exposures including air monitoring will be performed by qualified personnel.

#### 1). Hazard Evaluation:

The current activity by which a DPH, LPPCP staff member may encounter potential exposure to lead-based paint dust would occur during the inspection process at an active lead abatement or home renovation project. Work activities during a lead abatement process may generate large amounts of lead dust resulting from the disturbances of painted surfaces thereby releasing the components into the enclosed interior of a dwelling. Concentrations of lead dust may vary depending on the methodology of abatement/renovation and the percentage of lead in the disturbed surfaces. A full face PAPR (through past studies) has been determined to be adequate for any potential exposures

to lead dust that may be encountered from lead abatement activities. The hazardous constituents that may be encountered are:

- 1). Lead from lead-based paint dust, and
- 2). Asbestos fibers from asbestos containing materials.

**2). Updating the Hazard Assessment:**

The Program Administrator must revise and update the hazard assessment as needed. If an employee feels that respiratory protection is needed during a particular activity, he/she is to contact his or her supervisor or the Program Administrator prior to performing that activity. The Program Administrator will evaluate the potential hazard, utilizing outside assistance as necessary. The Program Administrator will then communicate the results of that assessment back to the employees. If it is determined that respiratory protection is advisable, all other elements of this program will be in effect for those tasks and this program will be updated accordingly.

**3). NIOSH Certification:**

All respirators must be certified by the National Institute for Occupational Safety and Health (NIOSH) and shall be used in accordance with the terms of that certification. Also, all filters, cartridges, and canisters must be labeled with the appropriate NIOSH approval label. The label must not be removed or defaced while it is in use.

**4). Voluntary Respirator Use:**

Voluntary use of respiratory protective equipment, as requested by each worker, is contingent on specific work site locations, work conditions, and the results of medical evaluations.

**B. Medical Evaluation:**

Employees who are either required to wear respirators, or who choose to wear a PAPR voluntarily, must first pass a medical evaluation. Employees are not permitted to wear respirators until a physician has determined that they are medically able to do so. Any employee refusing the medical evaluation will not be allowed to work in an area requiring respirator use. A licensed physician at the University of Connecticut (UCONN) Health Center where DPH/ LPPCP medical services are provided will provide the medical evaluations. Medical evaluation procedures are as follows:

- 1). The medical evaluation will be conducted using the questionnaire provided in Appendix 4 of this report of the OSHA Respiratory Protection Standard. The UCONN Health Center physician will provide a copy of this questionnaire to all employees who require medical evaluations.
- 2). All effected employees will be given a copy of the medical questionnaire to fill out. Employees will be permitted to fill out the questionnaire during their normal workday.
- 3). Employee medical examinations will be performed on an as needed basis or more often if deemed necessary by the UCONN Health Center physician.
- 4). All employees will be granted the opportunity to speak with the physician about their medical evaluation, if they so request.

- 5). The Program Administrator has provided the UCONN Health Center physician with a copy of this program, a copy of the Respiratory Protection standard, and a list of hazardous substances likely to be encountered. Additional information will be provided for each employee including his or her work area or job title, proposed respirator type and weight, length of time required to wear respirator, expected physical work load, potential temperature and humidity extremes, and any additional protective clothing required.

After an employee has received clearance and begun to wear his or her respirator, additional medical evaluations will be provided if any of the following circumstances develop:

1. Employee reports signs and/or symptoms related to their ability to use a respirator, such as shortness of breath, dizziness, chest pains, or wheezing.
2. The UCONN Health Center physician or supervisor informs the Program Administrator that the employee needs to be reevaluated.
3. Information from this program, including observations made during fit testing and program evaluation, indicates a need for reevaluation.
4. A change occurs in off site workplace conditions that may result in an increased physiological burden on the employee.

A copy of the results of the respirator use evaluation test will be given to each employee.

A list of DPH/LPPCP employees currently included in medical surveillance is as follows:

Sharon Sharp  
Mark Aschenbach  
John Lamb

The details of examinations and questionnaires remain confidential between the employee and the physician.

### **C. Fit Testing:**

Fit testing is required for all DPH/LPPCP employees in this program including employees who voluntarily wear PAPR's. Employee fit testing will be documented on the form provided in Appendix 1.

#### **Employees will be fit tested:**

- 1). Prior to being allowed to wear a respirator with a tight fitting facepiece.
- 2). Annually.
- 3). Upon request from the employee.
- 4). When there are changes in the employee's physical condition that could affect respiratory fit (e.g., obvious change in body weight, facial scarring, etc.).

Employees will be fit tested with the make, model, and size of respirator that they will actually wear. Fit testing of PAPRs is to be conducted in the negative pressure mode. A qualified Industrial Hygienist will conduct fit tests following the OSHA approved Irritant Smoke Protocol of the Respiratory Protection standard.

The Program Administrator has determined that the Quantitative Fit Test (QNFT) is not required for the respirators used under current conditions. If conditions affecting respirator use change, the program Administrator will evaluate on a case-by-case basis whether QNFT is required.

**D. Respirator Use:**

Respiratory protection is required for the following personnel:

<u>Name</u>	<u>Assigned Respirator(s)</u>
Sharon Sharp	Full facepiece PAPR
Mark Aschenbach	Full facepiece PAPR
John Lamb	Full facepiece PAPR

1). General Use Procedures:

- a) Employees will use their respirators under conditions specified by this program, and in accordance with the training they receive on the use of the PAPR model. The respirator shall not be used in a manner for which it is not certified by NIOSH or by its manufacturer.
- b) All employees shall conduct user seal checks each time they wear their respirator. Employees shall use both the positive and negative pressure checks specified in Appendix 3 of the OSHA Respiratory Protection Standard.
- c) All employees shall be allowed sufficient time during their work day to maintain their respirator as follows: to clean their respirator if the respirator is impeding their ability to work, change filters, replace parts, or to inspect the respirator if it stops functioning as intended.
- d) Employees are not permitted to wear tight-fitting respirators if they have any condition, such as facial scars, facial hair, or missing dentures, that prevents them from achieving a good seal. Employees are not permitted to wear headphones, jewelry or other articles that may interfere with the face piece-to-face-seal.
- e) Employees are permitted to leave the work area to wash their face and respirator face piece when necessary to prevent any skin irritations associated with respirator use.

2) Emergency Procedures:

If the respirator fails during use in a restricted environment the employee shall immediately exit the restricted environment and report the condition to the Program Coordinator.

3) Immediately Dangerous to Life or Health Procedures (IDLH):

The Program Administrator has not identified IDLH conditions to which employees will be exposed.

**E. Cleaning, Filter Change Schedules, Storage and Maintenance:**

1) Cleaning:

Individually assigned respirators are to be regularly cleaned as needed and disinfected by each employee in accordance with the manufacturer's recommendations. The following procedure is to be used when cleaning and disinfecting respirators:

- A) Disassemble respirator, removing filter canisters or cartridges.



- B) Wash the face piece and associated parts PER MANUFACTURES INSTRUCTIONS.
- C) Rinse completely in clean warm water or as per manufacture directions.
- D) Wipe the respirator with disinfectant wipes (70% Isopropyl Alcohol) or per manufacture directions) to kill germs.
- E) Air dry in a clean area.
- F) Replace filter with new filter if needed.
- G) Reassemble the respirator and replace any defective parts.
- H) Place in a clean, dry plastic bag or other airtight container.

NOTE: The Program Administrator will ensure an adequate supply of appropriate cleaning and disinfection material at the cleaning station. If supplies are low, employees should contact their supervisor, who will inform the Program Administrator.

2) Filter Change Schedule:

A filter element must be changed when an increase in breathing resistance is experienced by an employee. An adequate supply of filters will be maintained by the program Administrator and kept in the storage locker.

3) Storage:

Respirators must be stored in a clean, dry area, and in accordance with the manufacturer's recommendations. Each employee will clean and inspect their own respirator(s) in accordance with the provisions of this program and will store their respirator in a plastic bag. The Program Administration will store our supply of respirators and respirator components in their original manufacturer's packaging in the equipment storage locker of the "Lead Room" at 450 Capitol Avenue, Hartford, CT.

4) Defective Respirators:

Respirators that are defective or have defective parts shall be taken out of service immediately. If, during an inspection, an employee discovers a defect in a respirator, he/she shall cease using the respirator and bring the defect to the attention of the Program Administrator.

When a respirator is taken out of service for an extended period of time, the respirator will be tagged out of service, and the employee will be given and fit tested for a replacement of similar make, model, and size. The Program Administrator will keep all tagged out respirators.

5) Maintenance: Refer to the attached manufacturers' maintenance instructions in

Appendix 2. Maintenance inspections will be conducted at a minimal on a semiannual basis.

6) Inspections: Trained staff shall inspect respirators before each use and during cleaning and shall document the results on the respirator inspection log in Appendix 3.

**F. Training**

The Program Administrator will provide training to respirator users on the contents of the Respiratory Protection Program and their responsibilities under it, and on the OSHA Respiratory Protection standard. Employees will be trained prior to using a respirator at the work site.

The training course will include at least the following topics:

- 1) Respiratory Protection Program documents.
- 2) OSHA Respiratory Protection standard.
- 3) Respiratory hazards encountered by DPH/ LPPCP personnel and their health effects.
- 4) Selection and use of respirators
- 5) Limitations of respirators.
- 6) Respirator donning and user seal checks.
- 7) Fit testing.
- 8) Emergency procedures
- 9) Maintenance and storage
- 10) Medical signs and symptoms limiting the effective use of respirators.

Employees will be retrained on an annual basis as directed by the Program Administrator. Employees must demonstrate their understanding of the topics covered in the training through hands-on exercises.

The Program Administrator will document respirator training. The documentation will include the type, model, and size of respirator for which each employee has been trained and fit tested.

#### **5.0 Program Evaluation:**

The Program Administrator will conduct periodic evaluations of the offsite locations to ensure that the provisions of this program are being implemented. The evaluations will include regular consultations with employees who use respirators, site inspections, a review and an evaluation of the activities that warrant the use of the respirator, and a review of records.

The Program Administrator will address any problems that are identified. These findings will be reported to DPH management, and the report will list plans to correct deficiencies in the respirator program and target dates for the implementation of those corrections.

#### **6.0 Documentation and Recordkeeping:**

A written copy of this program and the OSHA standard is kept in the Program Administrator's office and is available for review by all employees. Also maintained in the Program Administrator's office are updated copies of training and fit test records.

The Program Administrator will also maintain copies of the written recommendation of employees' ability to wear a respirator.

**Appendix 1**

**RESPIRATOR FIT TESTING**

# DPH/ELU Fit Test

Name: \_\_\_\_\_ Date of Birth: \_\_\_\_\_ Employee Number: \_\_\_\_\_

Company Name: State of Connecticut  
Department of Public Health  
Lead Poisoning Prevention and Control Program

Company Address: 450 Capitol Avenue Telephone: (860) 509-7299  
City: Hartford State: CT Zip Code: 06106

Date of Medical Evaluation: \_\_\_\_\_ Result: \_\_\_\_\_ P \_\_\_\_\_ F

## Type of Test and Test Agent

Qualitative:

1. Irritant Smoke (Stannic Chloride):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Respirators Tested:

Brand: \_\_\_\_\_

Type: \_\_\_\_\_

Size: \_\_\_\_\_

Pass/Fail: \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Test Administered By: \_\_\_\_\_ (Name) \_\_\_\_\_ (Date) \_\_\_\_\_ (Signature)

Phone # \_\_\_\_\_ CH License # \_\_\_\_\_

## **Appendix 2**

# **RESPIRATOR MAINTENANCE**

As per manufacturers directions

**Appendix 3**

**RESPIRATOR INSPECTION LOG**

# RESPIRATOR INSPECTION LOG

1. TYPE \_\_\_\_\_ 2. NUMBER \_\_\_\_\_

ASSIGNED TO \_\_\_\_\_

**3. DEFECTS FOUND:**

A. Facepiece \_\_\_\_\_

B. Inhalation Valve \_\_\_\_\_

C. Exhalation Valve Assembly \_\_\_\_\_

D. Headbands \_\_\_\_\_

E. Cartridge Holder \_\_\_\_\_

F. Cartridge/Canister \_\_\_\_\_

G. Filter \_\_\_\_\_

H. Harness Assembly \_\_\_\_\_

I. Hose Assembly \_\_\_\_\_

J. Speaking Diaphragm \_\_\_\_\_

K. Gaskets \_\_\_\_\_

L. Connections \_\_\_\_\_

M. Other Defects \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

DATE: \_\_\_\_\_ INSPECTOR: \_\_\_\_\_

**Appendix 4**

**MEDICAL EVALUATION  
QUESTIONNAIRE**