

RESPIRATORY PROTECTION PROGRAM

I OBJECTIVE

The **Boston Public Schools** Respiratory Protection Program 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 company and its employees comply with Occupational Safety and Health Administration (OSHA) respiratory protection requirements as found in 29 CFR 1910.134.

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II. ASSIGNMENT OF RESPONSIBILITY

A. Employer

Boston Public Schools (BPS) is responsible for providing respirators to BPS employees when they are necessary for health protection. Boston Public Schools will provide respirators that are applicable and suitable for the intended purpose at no charge to affected employees. Any expense associated with training, medical evaluations and respiratory protection equipment will be borne by Boston Public Schools.

Private contractors working on BPS school property or for BPS, who by the nature of their work, need to provide respiratory personal protective equipment (PPE) to their employees must meet the requirements set forth in 29 CFR 1910.134 and this document ("Boston Public Schools' Respiratory Protection Program"). Documentation shall be provided as contract submittals.

B. Program Administrator

The Program Administrator for **Boston Public Schools** is the Environmental Specialist. The Program Administrator is responsible for administering the respiratory protection program. Duties of the program administrator include:

1. Identifying work areas, process or tasks that require workers to wear respirators.
2. Evaluating hazards.
3. Selecting respiratory protection options.
4. Monitoring respirator use to ensure that respirators are used in accordance with their specifications.
5. Arranging for and/or conducting training.
6. Ensuring proper storage and maintenance of respiratory protection equipment.
7. Conducting quantitative fit testing.
8. Administering the medical surveillance program.
9. Maintaining records required by the program.
10. Evaluating and updating the program as needed.

C. 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:

1. Ensuring that employees under their supervision (including new hires) receive appropriate training, fit testing, and annual medical evaluation.
2. Ensuring the availability of appropriate respirators and accessories.
3. Being aware of tasks requiring the use of respiratory protection.
4. Enforcing the proper use of respiratory protection when necessary.
5. Ensuring that respirators are properly cleaned, maintained, and stored according to this program.
6. Ensuring that respirators fit well and do not cause discomfort.
7. Continually monitoring work areas and operations to identify respiratory hazards.
8. Coordinating with the Program Administrator on how to address respiratory hazards or other concerns regarding this program.

D. Employees

Each employee is responsible for wearing his or her respirator when and where required and in the manner in which they are trained. Employees must also:

1. Care for and maintain their respirators as instructed, guard them against damage, and store them in a clean, sanitary location.
2. Inform their supervisor if their respirator no longer fits well, and request a new one that fits properly.
3. Inform their supervisor or the Program Administrator of any respiratory hazards that they feel are not adequately addressed in the workplace and of any other concerns that they have regarding this program.
4. Use the respiratory protection in accordance with the manufacturer's instructions and the training received.

II. APPLICABILITY

This program applies to all BPS employees who are required to wear respirators during normal work operations, as well as during some non-routine or emergency operations, such as drum sanding and the application of polyurethane to wood floors.

In addition, any employee who voluntarily wears a respirator when one is not required (i.e., in certain maintenance and coating operations) is subject to the medical evaluation, cleaning, maintenance, and storage elements of this program, and will be provided with necessary training. Employees who voluntarily wear filtering face pieces (dust masks) are not subject to the medical evaluation, cleaning, storage, and maintenance provisions of this program.

All employees and processes that fall under the provisions of this program are listed in Attachment D.

III. PROGRAM

A. Hazard Assessment and Respirator Selection

The Program Administrator will train supervisors on respiratory hazard assessment and with the supervisors will select respiratory PPE to be used on site, based on the hazards to which workers are exposed and in accordance with the OSHA Respiratory Protection Standard. The Program Administrator will conduct a hazard evaluation for each operation, process, or work area where airborne contaminants may be present in routine operations or during an emergency. A log of identified hazards will be maintained by the Program Administrator (See Sample Hazard Evaluation, Attachment C). The hazard evaluations shall include:

1. Identification and development of a list of hazardous substances used in the workplace by department or work process.
2. Review of work processes to determine where potential exposures to hazardous substances may occur. This review shall be conducted by surveying the workplace, reviewing the process records, and talking with employees and supervisors.
3. Exposure monitoring to quantify potential hazardous exposures.

The proper type of respirator for the specific hazard involved will be selected in accordance with the manufacturer's instructions. A list of employees and appropriate respiratory protection will be maintained by the Program Administrator (see Attachment D).

B. Updating the Hazard Assessment

The Program Administrator must revise and update the hazard assessment as needed (i.e., any time work process changes may potentially affect exposure). If an employee feels that respiratory protection is needed during a particular activity, he/she is to contact his/her supervisor or the Program Administrator. The Program Administrator will evaluate the potential hazard, and arrange for outside assistance as necessary. The Program Administrator will then communicate the results of that assessment to the employees. If it is determined that respiratory protection is necessary, all other elements of the respiratory protection program will be in effect for those tasks, and the respiratory program will be updated accordingly.

C. Training

The Program Administrator will provide training to respirator users and their supervisors on the contents of the Boston Public Schools' Respiratory Protection Program and their responsibilities under it, and on the OSHA Respiratory Protection Standard. All affected employees and their supervisors will be trained prior to using a respirator in the workplace. Supervisors will also be trained prior to supervising employees that must wear respirators.

The training course will cover the following topics:

1. the Boston Public Schools Respiratory Protection Program;
2. the OSHA Respiratory Protection Standard (29 CFR 1910.134);
3. respiratory hazards encountered at Boston Public Schools Facilities Management and their health affects;
4. proper selection and use of respirators;
5. limitations of respirators (no emergency entry or rescue);
6. respirator donning and user seal (fit) checks;
7. fit testing;
8. maintenance and storage; and
9. medical signs and symptoms limiting the effective use of respirators.

Employees will be retrained annually or as needed (e.g., if they change departments or work processes and need to use a different respirator). Employees must demonstrate their understanding of the topics covered in the training through hands-on exercises and a written test. Respirator training will be documented by the Program Administrator and the documentation will include the type, model, and size of respirator for which each employee has been trained and fit tested.

D. 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 the respirator is in use.

E. Medical Evaluation

Employees who are either required to wear respirators must pass a medical exam provided by Boston Public Schools Facilities Management, annually in April, before being permitted to wear a respirator on the job. 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 Occupational Health Initiative, Inc. 1101 Beacon Street, Eight East, Brookline, MA 02446 shall provide company medical services and provide the medical evaluations. The medical evaluations will be offered in April each year during the school vacation period at the International Union of Painters and Allied Trades Facility, 25 Colgate Road, Roslindale, MA. Medical evaluation procedures are as follows:

1. The medical evaluation will be conducted using the questionnaire provided in Appendix C of the OSHA Respiratory Protection Standard. The Program Administrator will provide a copy of this questionnaire to all employees requiring medical evaluations.
2. To the extent feasible, the company will provide assistance to employees who are unable to read the questionnaire. When this is not possible, the employee will be sent directly to the physician for medical evaluation.
3. All affected employees will be given a copy of the medical questionnaire to complete, along with a stamped and addressed envelope for mailing the questionnaire to the company physician. Employees will be permitted to complete the questionnaire on company time.
4. Follow-up medical exams will be granted to employees as required by the Standard, and/or as deemed necessary by the evaluating physician.
5. All employees will be granted the opportunity to speak with the physician about their medical evaluation, if they so request.
6. The Program Administrator shall provide the evaluating physician with a copy of this Program, a copy of the OSHA Respiratory Protection Standard, the list of hazardous substances by work area, and the following information about each employee requiring evaluation:
 - a. his or her work area or job title;
 - b. proposed respirator type and weight;
 - c. length of time required to wear respirator;
 - d. expected physical work load (light, moderate or heavy);
 - e. potential temperature and humidity extremes; and
 - f. any additional protective clothing required.
7. Positive pressure air purifying respirators will be provided to employees as required by medical necessity.
8. After an employee has received clearance to wear his or her respirator, additional medical evaluations will be provided under the following circumstances:
 - a. The employee reports signs and/or symptoms related to their ability to use the respirator, such as shortness of breath, dizziness, chest pains or wheezing.
 - b. The evaluating physician or supervisor informs the Program Administrator that the employee needs to be reevaluated.
 - c. Information found during the implementation of this program, including observations made during the fit testing and program evaluation, indicates a need for reevaluation.
 - d. A change occurs in workplace conditions that may result in an increased physiological burden on the employee.

All examinations and questionnaires are to remain confidential between the employee and the physician. The Program Administrator will only retain the physician's written recommendations regarding each employee's ability to wear a respirator.

F. Fit Testing

Employees who are required to wear half-face piece APRs will be fit tested:

1. prior to being allowed to wear any respirator with a tight-fitting face piece;
2. annually; or
3. 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. Employees will be provided with several models and sizes of respirators so that they may find an optimal fit. Fit testing of powered air purifying respirators will be conducted in the negative pressure mode.

The Program Administrator will conduct fit tests in accordance with the OSHA Respiratory Protection Standard.

G. General Respirator Use Procedures

1. Employees will use their respirators under conditions specified in this program, and in accordance with the training they receive on the use of each particular model. In addition, the respirator shall not be used in a manner for which it is not certified by NIOSH or by its manufacturer.
2. All employees shall conduct user seal checks each time they wear their respirators. Employees shall use either the positive or negative pressure check (depending on which test works best for them) as specified in the OSHA Respiratory Protection Standard.
 - a. Positive Pressure Test: This test is performed by closing off the exhalation valve with your hand. Breathe air into the mask. The face fit is satisfactory if some pressure can be built up inside the mask without any air leaking out between the mask and the face of the wearer.
 - b. Negative Pressure Test: This test is performed by closing of the inlet openings of the cartridge with the palm of you hand. Some masks may require that the filter holder be removed to seal off the intake valve. Inhale gently so that a vacuum occurs within the face piece. Hold your breath for ten (10) seconds. If the vacuum remains, and no inward leakage is detected, the respirator is fit properly.
3. All employees shall be permitted to leave the work area to maintain their respirator for the following reasons:
 - a. to clean their respirator if it is impeding their ability to work;
 - b. to change filters or cartridges;
 - c. to replace parts; or
 - d. to inspect respirator if it stops functioning as intended.

Employees should notify their supervisor before leaving the area.

4. Employees are not permitted to wear tight-fitting respirators if they have any condition, such as facial scars, facial hair, or missing dentures, that would prevent a proper seal. Employees are not permitted to wear headphones, jewelry, or other items that may interfere with the seal between the face and the face piece.

5. Before and after each use of a respirator, an employee or immediate supervisor must make an inspection of tightness or connections and the condition of the face piece, headbands, valves, filter holders and filters. Questionable items must be addressed immediately by the supervisor and/or Program Administrator.

H. Air Quality

For supplied-air respirators, only Grade D breathing air shall be used in the cylinders. The Madison Park Technical/Vocational High School Supervisor will coordinate deliveries of compressed air with the company's vendor and will require the vendor to certify that the air in the cylinders meets the specifications of Grade D breathing air.

The supervisor will maintain a minimum air supply of one fully charged replacement cylinder for each SAR unit. In addition, cylinders may be recharged as necessary from the breathing air cascade system located near the respirator storage area. These respirators will require specific permitted approval from Facilities Management for use at any school building outside of Madison Park Technical/Vocational High School auto body paint spray booth.

I. Change Schedules

Respirator cartridges shall be replaced as determined by the Program Administrator, supervisor(s), and manufacturers' recommendations (minimally, once per year or sooner as determined).

J. Cleaning

Respirators are to be regularly cleaned and disinfected at the designated respirator cleaning station. Respirators issued for the exclusive use of an employee shall be cleaned as often as necessary. Atmosphere-supplying and emergency use respirators are to be cleaned and disinfected after each use.

The following procedure is to be used when cleaning and disinfecting reusable respirators:

1. Disassemble respirator, removing any filters, canisters, or cartridges.
2. Wash the face piece and all associated parts (except cartridges and elastic headbands) in an approved cleaner-disinfectant solution in warm water (about 120 degrees Fahrenheit). Do not use organic solvents. Use a hand brush to remove dirt.
3. Rinse completely in clean, warm water.
4. Disinfect all facial contact areas by spraying the respirator with an approved disinfectant.
5. Air dry (do NOT use compressed air to dry) in a clean area.
6. Reassemble the respirator and replace any defective parts. Insert new filters or cartridges and make sure the seal is tight.
7. Place respirator in a clean, dry plastic bag or other airtight container.

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

K. Maintenance

Respirators are to be properly maintained at all times in order to ensure that they function properly and protect employees adequately. Maintenance involves a thorough visual inspection for cleanliness and defects. Worn or deteriorated parts will be replaced prior to use. No components will be replaced or repairs made beyond those recommended by the manufacturer.

Repairs to regulators or alarms of atmosphere-supplying respirators will be conducted by the manufacturer.

1. All respirators shall be inspected routinely before and after each use.
2. Respirators kept for emergency use shall be inspected after each use, and at least monthly by the Program Administrator to assure that they are in satisfactory working order
3. The Respirator Inspection Checklist (Attachment E) will be used when inspecting respirators.
4. A record shall be kept of inspection dates and findings for respirators maintained for emergency use.
5. Employees are permitted to leave their work area to perform limited maintenance on their respirator in a designated area that is free of respiratory hazards. Situations when this is permitted include:
 - a. washing face and respirator face piece to prevent any eye or skin irritation;
 - b. replacing the filter, cartridge or canister;
 - c. detection of vapor or gas breakthrough or leakage in the face piece; or
 - d. detection of any other damage to the respirator or its components.

L. Storage

After inspection, cleaning, and necessary repairs, respirators shall be stored appropriately to protect against dust, sunlight, heat, extreme cold, excessive moisture, or damaging chemicals.

1. 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 air-purifying respirator in accordance with the provisions of this program, and will store their respirator in a plastic bag in the designated area. Each employee will have his/her name on the bag and that bag will only be used to store that employee's respirator.
2. Respirators shall be packed or stored so that the face piece and exhalation valve will rest in a near normal position.
3. Respirators shall not be placed in places such as lockers or toolboxes unless they are in carrying cartons.
4. Respirators maintained at stations and work areas for emergency use shall be stored in compartments built specifically for that purpose, be quickly accessible at all times, and be clearly marked.
5. The Program Administrator will store Boston Public Schools Facilities Management supply of respirators and respirator components in their original manufacturer's packaging in the Environmental Sections Storage Cage at the Campbell Resource Center, 1216 Dorchester Avenue, Dorchester, MA.

M. Respirator Malfunctions and Defects

1. For any malfunction of an ASR (atmosphere-supplying respirator), such as breakthrough, face piece leakage, or improperly working valve, the respirator wearer should inform his/her supervisor that the respirator no longer functions as intended, and go to the designated safe area to maintain the respirator. The supervisor must ensure that the employee either receives the needed parts to repair the respirator or is provided with a new respirator.

All workers wearing atmosphere-supplying respirators will work with a buddy. The Program Administrator shall develop and inform employees of the procedures to be used when a buddy is required to assist a coworker who experiences an ASR malfunction.

2. 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 is to bring the defect to the attention of his/her supervisor. Supervisors will give all defective respirators to the Program Administrator. The Program Administrator will decide whether to:
 - a. temporarily take the respirator out of service until it can be repaired;
 - b. perform a simple fix on the spot, such as replacing a head strap; or
 - c. dispose of the respirator due to an irreparable problem or defect.

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 a replacement of a similar make, model, and size. All tagged out respirators will be kept in the Environmental Section's Storage Cage at the Campbell Resource Center, 1216 Dorchester Avenue, Dorchester, MA.

N. Program Evaluation

The Program Administrator will conduct periodic evaluations of the workplace to ensure that the provisions of this program are being implemented. The evaluations will include regular consultations with employees who use respirators and their supervisors, site inspections, air monitoring and a review of records. Items to be considered will include:

1. comfort;
2. ability to breathe without objectionable effort;
3. adequate visibility under all conditions
4. provisions for wearing prescription glasses;
5. ability to perform all tasks without undue interference; and
6. confidence in the face piece fit.

Identified problems will be noted in an inspection log and addressed by the Program Administrator. These findings will be reported to Boston Public Schools Facilities Management administration, and the report will list plans to correct deficiencies in the respirator program and target dates for the implementation of those corrections.

O. Documentation and Recordkeeping

1. A written copy of this program and the OSHA Respiratory Protection Standard shall be kept in the Program Administrator's office and made available to all employees who wish to review it.
2. Copies of training and fit test records shall be maintained by the Program Administrator. These records will be updated as new employees are trained, as existing employees receive refresher training, and as new fit tests are conducted
3. For employees covered under the Respiratory Protection Program, the Program Administrator shall maintain copies of the physician's written recommendation regarding each employee's ability to wear a respirator. The completed medical questionnaires and evaluating physician's documented findings will remain confidential in the employee's medical records at the location of the evaluating physician's practice.

Summary of significant dates and deadlines:

Date	Activity
April 30	Medical Evaluations & Respiratory Fit Testing at IUPAT Union Hall 25 Colgate Rd Roslindale, MA
July 30	Annual Review of Boston Public Schools' Respiratory Protection Program
September 30	Medical Evaluations & Respiratory Fit Testing at Madison Park Technical/Vocational High School

For more information about this circular, contact:

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Carol R. Johnson, Superintendent

Sample Hazard Assessment Log

Hazard Assessment Log				
<u>DATE</u>				
Department	Contaminants	Exposure Level (8 hr TWA*)	PEL **	Controls
Building Services – Custodial Flooring Work Crew	Polyurethane			
Building Services – Custodial Drum Sanding	Particulates, wood dust			
Madison Park Tech/Voc HS	Spray paint application			

* Summarized from Industrial Hygiene report provided by ***Responsible Person***.

** These values were obtained from a survey on average exposures as published in the American Journal of Industrial Hygiene _____.

Sample Record of Respirator Use

Required and Voluntary Respirator Use at (<i>Company Name</i>)	
Type of Respirator	Department/Process
Filtering face piece (dust mask)	Barrier protection for clean-up of flooded work areas. Voluntary with Facilities Management approval dusty clean-ups.
Half-face piece APR or PAPR with P100 filter	Custodial drum-sanding crew
SAR, pressure demand, with auxiliary SCBA	None
Continuous flow SAR with hood	None
Half-face piece APR with organic vapor cartridge	Custodial flooring crew – application of polyurethane
Escape SCBA	None

* until ventilation is installed.

Sample Hazard Evaluation

Process Hazard Evaluation for <u>Boston Public Schools Facilities Management</u>	
<u>DATE</u>	
Process	Noted Hazards
Prep-sanding	Ventilation controls on some sanders are in place, but employees continue to be exposed to respirable wood dust Half-face piece APRs with P100 filters and goggles are required for employees sanding wood pieces. PAPRs will be available for employees who are unable to wear an APR.
Prep-cleaning	
Assembly	Ventilation controls on sanders are in place, but employees continue to be exposed to respirable wood dust; half-face piece APRs with P100 filters and goggles are required for employees sanding wood pieces in the assembly department. PAPRs will be available for employees who are unable to wear an APR.
Maintenance	Because of potential IDLH conditions, employees cleaning dip coat tanks must wear a pressure demand SAR during the performance of this task.
Cleaning Spray Booth Walls	Employees may voluntarily wear half-face piece APRs with P100 cartridges. Although exposure monitoring has shown that exposures are kept within PELs during this procedure, <u>Company Name</u> will provide respirators to workers who are concerned about potential exposures
Loading Coating Agents into Supply Systems	
Changing Booth Filters	Employees may voluntarily wear half-face piece APRs with P100 cartridges. Although exposure monitoring has shown that exposures are kept within PELs during this procedure, <u>Company Name</u> will provide respirators to workers who are concerned about potential exposures

(Include documentation of the sampling data that hazard evaluation is based on.

Respirator Inspection Checklist

Type of Respirator:	Location:
Respirator Issued to:	Type of Hazard:
Face piece	<input type="checkbox"/> Cracks, tears, or holes <input type="checkbox"/> Face mask distortion <input type="checkbox"/> Cracked or loose lenses/face shield
Head straps	<input type="checkbox"/> Breaks or tears <input type="checkbox"/> Broken buckles
Valves:	<input type="checkbox"/> Residue or dirt <input type="checkbox"/> Cracks or tears in valve material
Filters/Cartridges:	<input type="checkbox"/> Approval designation <input type="checkbox"/> Gaskets <input type="checkbox"/> Cracks or dents in housing <input type="checkbox"/> Proper cartridge for hazard
Air Supply Systems	<input type="checkbox"/> Breathing air quality/grade <input type="checkbox"/> Condition of supply hoses <input type="checkbox"/> Hose connections <input type="checkbox"/> Settings on regulators and valves
Rubber/Elastomer Parts	<input type="checkbox"/> Pliability <input type="checkbox"/> Deterioration

Inspected by:	Date:
Action Taken:	

Sample Immediately Dangerous to Life and Health (IDLH) Assessment Log

(Only for specifically contracted employees – no BPS employees will be required as part of their job description to enter a permit-required confined space)

The Program Administrator has identified the following area as presenting the potential for IDLH conditions:

Process	IDLH Condition	Procedure
		Workers will follow the permit required confined space entry procedures specified in the <u>(Company Name)</u> Confined Space Program. As specified in these procedures, the Program Administrator has determined that workers entering this area shall wear a pressure demand SAR. In addition, an appropriately trained and equipped standby person shall remain IMMEDIATELY outside the work area and maintain constant voice and visual communication with the worker. In the event of an emergency requiring the standby person to enter the IDLH environment, the standby person shall immediately notify the Program Administrator and will proceed with rescue operations in accordance with rescue procedures outlined in the <u>(Company Name)</u> Confined Space Program.

 Program Administrator

 Date