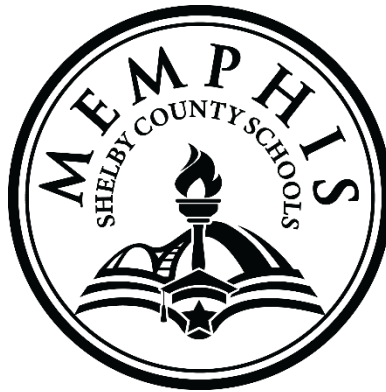


Memphis Shelby County Schools

Respiratory Safety Program



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Modified: 5/1/2026

Responsibility

The respiratory safety program is the responsibility of the Memphis Shelby County School (MSCS) district and impacts the following departments: Facilities/Maintenance, Custodial Operations, Environmental Health & Safety (EHS) and the Asbestos Abatement team.

Department Managers and Supervisors are responsible for adhering to this program's requirements and ensuring the program is followed by employees under their charge.

Employees required to wear respirators are responsible for upkeep, care, & maintenance as well as adhering to this program's requirements.

Compliance

The [OSHA Subpart I 1910.134 standard](#) is the governing authority on respiratory protection for worker safety.

The [OSHA Subpart Z 1910.1001 - asbestos standard](#) outlines specific requirements on respiratory protection when working with or abating asbestos. This includes a written asbestos plan (separate and apart from this program) and a respiratory program for employees affected by these exposures as required by OSHA 1910.1001(f)(2)(i).

Program Review & Evaluation

This program will be reviewed at a minimum of annually by Risk Management and the EHS Dept.

Authorized Use of Respirators

The use of a respirator will be authorized and provided by the MSCS department manager when it is necessary to protect the health and safety of the affected employee from hazards such as harmful dusts, fogs, fumes, mists, gases, smokes, sprays, vapors, or any other atmospheric contaminant.

All respirators used by the school district must be NIOSH certified with all filters, cartridges, and canisters labeled with NIOSH approval.

Voluntary Use of Respirators

MSCS allows employees to wear a respirator ***voluntarily*** as long as

- 1) it does not present or create a hazard to the employee or others
and
- 2) the employee notifies their supervisor/manager in writing with their concerns and reasons why they are choosing to wear a respirator

Employees must heed all instructions provided by the manufacturer for respirator use and care including the limitations of the respirator and any warnings specifically prescribed by the manufacturer.

This program does not touch upon the voluntary or mandatory use of COVID 19 masks for public health concerns.

Hazard Assessment

Each Dept Manager or Supervisor will be responsible for identifying tasks requiring respiratory protection. This includes but is not limited to:

- Asbestos insulation, floor tile & ceiling tile abatement
- Custodial work involving mixing of cleaning agents & solvents (based on Safety Data Sheet or Manufacturer recommends a respirator is used)

- Maintenance involving excessive sanding, paint mixing (based on Safety Data Sheet recommendation), or insulation (non-asbestos) removal
- Health-related isolation areas (nurse's office during outbreaks)

A reassessment must be completed if there is a change in workplace hazards or a different type of respirator is to be used.

Respirator Selection & Usage

The Department Manager or Supervisor will be responsible for selecting respirators based on hazard type and OSHA/NIOSH guidelines.

Some common types of respirators to be used include:

- N95 filtering facepiece for airborne infectious agents
- Half-mask respirator with cartridges for chemical vapors
- Powered air-purifying respirator (PAPR) for high-risk medical isolation

Employees must use their respirators under conditions specified in this program and according to the training they receive in the use of each particular model. The respirator shall not be used in a manner for which it is not certified by NIOSH or by its manufacturer.

All employees shall conduct user seal checks each time they wear their respirators under supervision of their manager or supervisor. Employees must use either the positive or negative pressure check (depending on which test works best for them).

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.

Negative Pressure Test: This test is performed by closing off the inlet openings of the cartridge with the palm of your 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 fits properly.

All employees shall be permitted to leave the work area (after notifying their supervisor) to maintain their respirators for the following reasons:

- a. To clean their respirator if it impedes their ability to work
- b. To change filters or cartridges

- c. To replace parts
- d. To inspect the respirator if it stops functioning as intended

Employees are not permitted to wear tight-fitting respirators if they have any condition, such as facial scars, facial hair, or missing dentures, that will 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.

Before and after each use of a respirator, an employee or supervisor must inspect the 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 or Dept Manager.

Respirators must be worn during identified tasks and stored properly when not in use in an airtight container or sealed bag. Damaged or defective respirators must be replaced immediately.

For supplied-air respirators, only Grade D breathing air shall be used in the cylinders. The Dept Manager or 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 manager or supervisor will maintain a minimum air supply of one fully charged replacement cylinder for each supplied air respirator (SAR) unit. In addition, cylinders may be recharged as necessary from the breathing air cascade system located near the respirator storage area.

Respirator cartridges must be replaced as determined by the Dept Manager, supervisor, or manufacturers' recommendations. The Dept Manager or supervisor will implement a cartridge change schedule based on objective information or data that will ensure cartridges are changed before the end of their service life.

For specific respirator selection concerning asbestos abatement exposures please see the Asbestos Respiratory Protection section of this program.

Medical Evaluation & Fit Testing

MSCS retains a licensed/certified medical doctor to perform the medical evaluation and a licensed 3rd party vendor to conduct the fit testing (See **Appendix A**) and pulmonary function test.

Seal checks must be completed by the MSCS department manager each time the respirator is used. For a list of these procedures see **Appendix A**.

Training

For non-asbestos abatement work involving respirators, training must be completed initially and annually. This training will cover:

- Respirator functions and usage
- Proper use, limitations, and maintenance
- Emergency procedures and usage of the respirator
- How to recognize signs of the respirator mask and equipment failure

Retraining with an employee must be done if there is a change in workplace hazards or job functions related to wearing of the respirator.

Cleaning, Maintenance & Storage of Respirators

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. See **Appendix B** for additional information.

Respirators are to be properly maintained at all times 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 before 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 manager or supervisor to ensure that they are in satisfactory working order.
3. A record shall be kept of inspection dates and findings for respirators maintained for emergency use.

4. 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.
 - d. Detection of any other damage to the respirator or its components.
5. Only trained personnel should perform maintenance on atmosphere-supplying respirators beyond routine cleaning and sanitizing.
6. All respirator maintenance will be documented including the date of maintenance, type of maintenance performed, and the person performing the maintenance.

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, according to the manufacturer's recommendations. Each employee will clean and inspect their air-purifying respirator according to the provisions of this program and will store their respirator in a plastic bag in the designated area. Each employee will have his or 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 or tossed loosely in a vehicle or storage room.
4. Respirators maintained for emergency use shall be stored in compartments built specifically for that purpose, be quickly accessible at all times, and be clearly marked.

Emergency Use Procedures

In emergencies where an atmosphere exists in which the wearer of the respirator could be overcome by a toxic or oxygen-deficient atmosphere, the following procedure should be followed.

1. When the alarm sounds, employees in the affected area must immediately don their emergency escape respirators, shut down their work, and exit the area following the established emergency evacuation routes for that specific location.
2. All other employees must immediately evacuate the building following the established emergency evacuation routes.
3. Employees who must remain in a dangerous atmosphere must take the following precautions:
 - a. Employees must never enter a dangerous atmosphere without at least one additional person present. The additional person must remain in a safe atmosphere.
 - b. Communication (voice, visual, or signal line) must be maintained between both individuals or all present.
 - c. Respiratory protection in these instances is for escape purposes only.

Recordkeeping

A written copy of this program and shall be kept with each department manager as well as Risk Management and made available to all employees who wish to review it.

Copies of training and fit test records shall be maintained by the Department Manager or Supervisor. These records will be updated as new employees are trained, as existing employees receive refresher training, and as new fit tests are conducted.

For employees covered under this program, the Department Manager or Supervisor must 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.

The Dept Manager or Supervisor will maintain records of medical evaluations, fit tests, and respirator maintenance and inspections. All records will be made available upon request to affected employees, their designated representatives, and to OSHA or other regulatory agencies with proper authority.

ASBESTOS RESPIRATORY PROTECTION

Engineering controls and work practice controls must first be considered. When these controls are rendered insufficient to reduce district employee exposure to below the 8-hr time weighted average (TWA) of 0.1 fibers/cm³ or the short term (30-min) exposure limit of 1 fibers/cm³, then respiratory protection must be provided.

Air monitoring & sampling must be conducted prior to determining the need for respiratory use.

For the treatment, removal, or repair of asbestos on pipe & tank insulation, ceiling tiles, and flooring tiles MSCS must provide each employee who is or will be exposed to asbestos an appropriate **respirator** that complies with OSHA's PPE and Asbestos standards as well as the AHERA standard at MSCS schools and/or facilities.

This includes any employee entering an asbestos-regulated area that shall be supplied with and required to use a respirator.

No district employee will be assigned to tasks requiring the use of respirators if, based on their most recent medical examination, the examining physician determines that the employee will be unable to function normally using a respirator, or that the safety or health of the employee or other employees will be impaired by the use of a respirator.

Any such employee must be assigned to another job or given the opportunity to transfer to a different position, the duties of which they can perform to include the same seniority, status, and rate of pay the employee had just prior to such transfer.

Respirators must be used during:

- Periods necessary to install or implement feasible engineering and work-practice controls.
- Work operations, such as maintenance and repair activities, for which engineering and work-practice controls are not feasible.
- Work operations for which feasible engineering and work-practice controls are not yet sufficient to reduce employee exposure to or below the TWA and/or excursion limit.
- Emergency abatement work.

Determining the Correct Respirator

MSCS will provide 'at no cost to the employee' a tight-fitting, powered air-purifying respirator (PAPR) and/or a negative pressure respirator equipped with high efficiency filters (HEPA/P100). Additionally, only Half Mask, Full Facepiece, and Helmet/Hood respirators are allowed with HEPA filtration. Determining the correct respirator to use will be based on the Assigned Protection Factor (APF). See Table I for additional APF information.

The Assigned Protection Factor is as follows:

$$EL / PEL = APF$$

[Where EL is the Exposure Level determined by air sampling of the area in question and the PEL is the Permissible Exposure Level as determined by the NIOSH chemical guide]

For example,

An air sampling renders an asbestos exposure of .4 ppm TWA and both OSHA and NIOSH set the PEL at .1 ppm TWA. This would give an APF of 4 (.4 / .1 = 4) and therefore require a minimum of a Half Mask PAPR.

Table I: Assigned Protection Factors					
Type of Respirator	Quarter mask	Half mask	Full facepiece	Helmet/Hood	Loose-fitting facepiece
1. Air-Purifying Respirator	5	10	50	—	—
2. Powered Air-Purifying Respirator (PAPR)	—	50	1,000	25/1,000	25
3. Supplied-Air Respirator (SAR) or Airline Respirator					
• Demand mode	—	10	50	—	—
• Continuous flow mode	—	50	1,000	25/1,000	25
• Pressure-demand or other positive-pressure mode]	—	50	1,000	—	—
4. Self-Contained Breathing Apparatus (SCBA)	—	10	50	50	—
• Demand mode	—	—	10,000	10,000	—
• Pressure-demand or other positive-pressure mode (e.g., open/closed circuit)]					

Single use, disposable paper dust masks are NOT allowed nor permitted under any circumstance when dealing with asbestos.

Protective work clothing and equipment for asbestos exposures are covered under the Asbestos written program and the PPE program.

Employees CANNOT eat, drink, smoke, chew tobacco or gum, or apply cosmetics in asbestos regulated areas.

Where the use of respirators and protective clothing is required for Asbestos Containing Material (ACM) or Presumed Asbestos Containing Material (PACM), a warning sign must be posted at the entrance to affected area stating:

WEAR RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA

Pre-placement Examinations for Respiratory Use

A medical examination must be completed with an emphasis on the employee's respiratory system to include a pulmonary function test determining the employee's ability to wear a respirator. This is in accordance with 1910.1001(l)(2)(ii).

MSCS will provide the medical doctor completing the examination with a description of respiratory equipment used or to be used.

Fit testing for a respirator must occur initially and annually thereafter for the district employee.

Maintenance and Care of Respirators

Respirators must be kept clean and sanitary; disinfected according to the respirator manufacturer's specifications. See **Appendix B** for additional information.

Respirators used for the purpose of asbestos inspection and abatement must be stored separately.

Storage requirements must include:

- placing the respirator in a large, sterile plastic bag which can be sealed which is then placed in a designated box or locker.
- preventing them from being damaged, contaminated, accruing dust, sunlight or extreme temperatures, excessive moisture, and damaging chemicals.
- packing/storing the respiratory to prevent deformation of the facepiece and exhalation valve.

Respirators must be inspected prior to use. This includes:

- checking the respirator function, tightness of connections, and the condition of the various parts including the facepiece, head straps, valves, connecting tube, and cartridges, canisters or filters.
- checking elastomeric parts for pliability and signs of deterioration.

Any respirators that fail an inspection or are found to be defective must be removed from service and discarded with a replacement ordered and issued to that employee.

Training

Initial and Annual respiratory training must be provided for affected district employees required to wear a respirator for asbestos abatement.

This training must include the following:

- the overall asbestos abatement process
- when & where the respirators will be used
- why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator
- the limitations and capabilities of the respirator
- how to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions
- how to inspect, put on and remove, use, and check the seals of the respirator
- what the procedures are for maintenance and storage of the respirator
- how to recognize medical signs and symptoms that may limit or prevent the effective use of respirators

In addition to initial & annual training, retraining must be completed when the following situations occur:

- changes in the workplace or the type of respirator render previous training obsolete
- inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill
- any situation arises in which retraining appears necessary to ensure safe respirator use.

Appendix A

Fit Testing & Seal Check Protocols

I. Qualitative and Quantitative Fit Testing must be completed for each employee using a respirator according to the following procedures:

1. The test subject shall be allowed to pick the most acceptable respirator from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.
2. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This instruction may not constitute the subject's formal training on respirator use, because it is only a review.
3. The test subject shall be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.
4. The test subject shall be instructed to hold each chosen facepiece up to the face and eliminate those that obviously do not give an acceptable fit.
5. The more acceptable facepieces are noted in case the one selected proves unacceptable; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given. If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.
6. Assessment of comfort shall include a review of the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:
 - Position of the mask on the nose
 - Room for eye protection
 - Room to talk
 - Position of mask on face and cheeks
7. The following criteria shall be used to help determine the adequacy of the respirator fit:
 - Chin properly placed
 - Adequate strap tension, not overly tightened
 - Fit across nose bridge
 - Respirator of proper size to span distance from nose to chin
 - Tendency of respirator to slip
 - Self-observation in mirror to evaluate fit and respirator position

8. The test subject shall conduct a user seal check, either the negative and positive pressure seal checks described in this section or those recommended by the respirator manufacturer which provide equivalent protection to these procedures. Before conducting the negative and positive pressure checks, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. Another facepiece shall be selected and retested if the test subject fails the user seal check tests.
9. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard, mustache or sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed.
10. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician or other licensed health care professional, as appropriate, to determine whether the test subject can wear a respirator while performing her or his duties.
11. If the employee finds the fit of the respirator unacceptable, the test subject shall be given the opportunity to select a different respirator and to be retested.
12. Exercise regimen. Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure. The description of the process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.
13. The fit test shall be performed while the test subject is wearing any applicable safety equipment that may be worn during actual respirator use which could interfere with respirator fit.
14. Test Exercises.
 - (a) Vendor must perform the following test exercises for all fit testing methods prescribed in this appendix, except for the two modified ambient aerosol CNC quantitative fit testing protocols, the CNP quantitative fit testing protocol, and the CNP REDON quantitative fit testing protocol. For the modified ambient aerosol CNC quantitative fit testing protocols, vendor shall ensure that the test subjects (*i.e.*, employees) perform approved exercise procedures for full-facepiece and half-mask elastomeric respirators, or the exercise procedures for filtering facepiece respirators. Vendor shall ensure that the test subjects (*i.e.*, employees) perform the exercise procedures for the CNP quantitative fit testing protocol, or the exercise procedure for the CNP REDON quantitative fit testing protocol. For the remaining fit testing methods, vendor shall ensure that the test

exercises are performed in the appropriate test environment in the following manner:

- (1) Normal breathing. In a normal standing position, without talking, the subject shall breathe normally.
- (2) Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.
- (3) Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.
- (4) Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).
- (5) Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as OSHA's Rainbow Passage, count backward from 100, or recite a memorized poem or song.

II. User Seal Check procedures involve individuals who use a tight-fitting respirator. The department manager and/or supervisor is to perform a user seal check to ensure that an adequate seal is achieved each time the respirator is put on. Either the positive and negative pressure checks listed in this appendix, or the respirator manufacturer's recommended user seal check method can be used. (*User seal checks are not substitutes for qualitative or quantitative fit tests*).

1. Facepiece Positive and/or Negative Pressure Checks

- A. *Positive pressure check*. Close off the exhalation valve and exhale gently into the facepiece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the facepiece without any evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.
- B. *Negative pressure check*. Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s), inhale gently so that the facepiece collapses slightly, and hold the breath for ten seconds. The design of the inlet opening of some cartridges cannot be effectively covered with the palm of the hand. The test can be performed by

covering the inlet opening of the cartridge with a thin latex or nitrile glove. If the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

2. Manufacturer's Recommended User Seal Check Procedures

- The respirator manufacturer's recommended procedures for performing a user seal check may be used instead of the positive and/or negative pressure check procedures provided that the employer demonstrates that the manufacturer's procedures are equally effective.

Appendix B

Respirator Cleaning Procedures

Always refer to the respirator manufacturer's cleaning recommendations. In light of this, please adhere to the following:

- Remove filters, cartridges, or canisters.
- Disassemble facepieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
- Wash components in warm water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
- Rinse components thoroughly in clean, warm, preferably running water.
- Drain the water from the respirator.
- When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:
 1. Hypochlorite solution (50 ppm of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of water at 43 °C (110 °F)
 2. Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6-8 grams ammonium and/or potassium iodide/100 cc of 45% alcohol) to one liter of water at 43 °C (110 °F)
 3. Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer
- Rinse components thoroughly in clean, warm, preferably running water.
- Drain the water from the respirator.
- The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
- Components should be hand-dried with a clean lint-free cloth or air-dried.
- Reassemble facepiece, replacing filters, cartridges, and canisters where necessary.
- Test the respirator to ensure that all components work properly.