Farmingdale State College

State University of New York

RESPIRATORY PROTECTION PROGRAM

1910.134 OSHA Respiratory Protection Standard

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Introduction

Farmingdale State College (FSC) is committed to maintaining a safe and healthy work environment for all faculty, staff, and students. Managers and supervisors are responsible for maintaining, implementing, and enforcing good health and safety practices. When effective engineering or administrative controls are not feasible or practical, or in emergency situations, the use of personal respiratory protective equipment may be necessary to protect the health of employees.

This Written Respiratory Protection Program is designed to protect employees by establishing accepted practices for selection, use, and care of respirators. This program is intended to meet the Occupational Safety and Health Administration (OSHA) requirements for General Industry outlined in 29 CFR 1910.134. This program applies to all employees who are required to wear a respirator to prevent unnecessary exposure to:

- asbestos and other potentially harmful particulates;
- airborne concentrations of toxic materials equal to or greater than the permissible exposure limits (PELs);
- and for those who choose to use a filtering facepiece respirator voluntarily.

Section 1: Responsibilities

Environmental Health and Safety (EH&S) Office

The Industrial Hygiene Officer (IHO) serves as the Program Administrator and has the primary responsibility for the implementation and enforcement of the program. Duties and responsibilities include the following:

- Developing, implementing, and evaluating the Respiratory Protection Program to ensure compliance.
- Assisting with identifying the task or environment requiring the use of a respirator.
- Recommending appropriate respirators and filtering media for tasks that require the use of a respirator.
- Providing general information and training related to respiratory protection for affected employees.
- Notifying affected staff whenever a new procedure/policy change is introduced and providing additional training on the equipment.
- Reviewing fit testing of employees.
- Coordinating the medical evaluation program for employees.
- Maintaining a list of employees medically approved for use of respiratory protective equipment.
- Evaluating the effectiveness of the program.

Supervisor Responsibilities

Supervisors are responsible for providing the necessary direction and support to ensure the effective implementation of the Respiratory Protection Program for their work areas. Supervisors are responsible for the following:

- Contacting the Industrial Hygiene Officer when a respirator is planned to be used.
- Ensuring that employees **required** to use a respirator for their work are enrolled in the medical evaluation and fit testing program.
- Ensuring that employees are provided with respirators at no cost when the use is mandatory under the program.
- Conducting regular inspections and evaluations to determine the effectiveness of this program.
- Attending training on the proper use and storage of a respirator.
- Ensuring that employees are fit tested for a respirator when required under the program.
- Ensuring their employee(s) complete the medical evaluation when required under the program.
- Ensuring employees properly maintain their respirator to manufacturer recommendations.
- Ensuring that employees using a filtering facepiece respirator (i.e. N95) **voluntarily** are provided with the information in Appendix A.

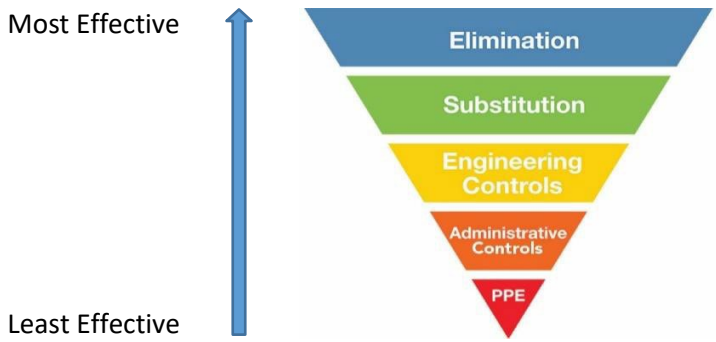
Employee Responsibilities

Employees who are required to use respiratory protection shall:

- Comply with all requirements under the Respiratory Protection Program.
- Participate in medical clearance procedures, training sessions, tests for competency validation, and fit testing.
- Inspect their reusable respirators before each use and clean/disinfect after each use according to procedures for reusable respirators.
- Ensure that respirators are not being worn when there is a physical impediment to continuous contact between the sealing surface of the respirator and the wearer's face (i.e., facial hair).
- Use, maintain, clean, and store their respirator away from contamination in a clean, sanitary place, and on a flat surface in a sealed container. Avoid extreme temperatures. Do not hang a respirator by its straps and always disinfect in accordance with manufacturer recommendations.
- Report any significant changes or problems to their supervisor.
- Not reuse a grossly contaminated N95 respirator and be sure to dispose of the mask properly.

Section 2: Hierarchy of Controls to Minimize Hazardous Exposure

The requirements to wear a respirator should be the last resort in the hierarchy or risk controls. The hierarchy is provided below in order of effectiveness, with #1 (Elimination) being the most effective:



1. **Elimination:** The primary objective is to prevent atmospheric contamination by eliminating the hazard from the work process.
2. **Substitution:** Use less toxic materials in place of hazardous components.
3. **Engineering Controls:** Use enclosures or confinement for the operation with general and local ventilation to reduce exposure to contaminants.
4. **Administrative Controls:** Scheduling to reduce time of exposure, and following all safety policies in place to prevent unnecessary exposure (i.e., wet mopping to reduce dust).
5. **Personal Protective Equipment (PPE):** This should be the final step in the hierarchy of risk controls and includes items used to protect the health and safety of the employee such as gloves, safety glasses, coveralls, safety shoes, dust masks, and respirators.

Section 3: Respiratory Program Elements

3.1 Respirator Use Requirements

Respirators are considered an acceptable method of protecting the health of employees only under the following circumstances:

- When it has been determined by all parties that there are no feasible engineering or work practice controls that can be used to adequately control the hazard.
- Where required during intermittent and non-routine operations.
- During the interim periods when engineering controls are being designed and/or installed for a particularly hazardous operation.
- During emergency situations.
- During voluntary use where respiratory protection is not required.

3.2 Respirator Selection Procedures

Respirators will be selected based on many factors, including the nature of the hazard, the concentration of the contaminant to which an employee is exposed, extent of the hazard, regulatory requirements, work requirements and conditions, and the characteristics and limitations of available respirators.

- Respirators are to be selected based on the respiratory hazard(s) to which the worker is exposed within the workplace, and user factors that affect respirator performance and reliability.
- Each supervisor is to evaluate the respiratory hazards in the workplace and identify relevant workplace and user factors. The Industrial Hygiene Officer can help supervisors evaluate potential air contaminants and inhalation hazards. The evaluation of respiratory hazards is to include a reasonable estimate of employee exposure and an identification of the contaminant's chemical state and physical form. If an unsafe exposure situation exists, the feasibility of engineering or administrative controls will be considered. If these preferred methods of controlling exposures are not feasible, appropriate respirators shall be provided and used.
- Tight-fitting air purifying respirators shall not be worn when conditions prevent a good face seal. Such conditions include, but are not limited to, growth of a beard, sideburns, any piece of clothing that projects under the facepiece, and/or temple pieces on glasses.

Respirator types offer differing levels of protection. There are advantages and disadvantages to each type of respirator, so it is important to select the type that is best suited to the work setting and exposure hazards. Appendix B provides an image and summary of different types of respirators and compliance requirements for each based on usage.

Key definitions are provided as Appendix C which may also aid in the selection and understanding of respirator usage.

3.3 IDLH Atmosphere Respirators

Immediately Dangerous to Life and Health (IDLH) atmospheres warrant special consideration. All oxygen-deficient atmospheres, less than 19.5% oxygen, are considered IDLH. The following respirators are to be used in IDLH atmospheres:

1) A Self-Contained Breathing Apparatus (SCBA) used in pressure-demand mode, certified by the National Institute for Occupational Safety and Health (NIOSH) for a minimum service life of thirty minutes.
2) A combination full facepiece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.

Respirators provided only for escape from IDLH atmospheres are to be NIOSH-certified for escape from the atmosphere in which they will be used. Any employee(s) required to use SCBA must be trained, tested, and certified prior to use. As of the creation of this Written Respiratory Protection Program, there are no FSC employees required to use SCBA.

3.4 Medical Evaluation

Employers must provide medical evaluations for employees who are required to wear a respirator for their work to determine if the employee is medically able to wear a respirator. Respirators can make breathing more difficult and some health conditions could prevent respirator use, such as a heart condition, lung disease, or psychological condition (i.e., claustrophobia).

The medical evaluation is confidential and considers health, job description, type of respirator used, and workplace conditions. The employer is required to fund all costs associated with the medical evaluation.

The medical evaluation is provided as an online questionnaire. The employee must be allowed to complete the questionnaire during work hours. The evaluation is conducted by board-certified occupational medicine doctors not associated with FSC. Data is handled according to strict data control and Health Insurance Portability and Accountability Act (HIPPA) standards. FSC EH&S will only receive notice that the employee has been cleared for respiratory use or if further medical evaluation is necessary.

The medical evaluation must be conducted by a licensed health care professional and the screening questions must meet the requirements listed in Appendix D. A follow-up medical exam must be provided to employees who give a positive response to any of the questions 1-9 in Section 2 of the questionnaire.

Only employees who receive a Medical Approval Form following the medical evaluation indicating that they are approved to don a respirator may wear one. An example of such a Medical Approval Form is provided as Appendix E.

3.5 Fit Testing

Before any employee may be required to use a tight-fitting facepiece respirator, the employee must be fit tested with the same make, model, style, and size respirator that will be used.

General requirements for mandatory respirator use:

- The program administrator or other designated personnel shall perform required fit tests following receipt of the medical clearance.
- At a minimum, all personnel must pass a Quantitative Fit Test (QNFT) before being allowed to use a tight-fitting facepiece respirator. At the discretion of the Industrial Hygiene Officer, some personnel and/or tasks may warrant a Qualitative Respirator Fit Test (QLFT).
- Respirator users shall pass a fit test prior to initial use of the respirator, or whenever a different respirator (size, style, model, or make) is used, and at least annually thereafter.
- Respirator users shall pass an additional fit test whenever the supervisor or respiratory protection program administrator observes changes in the employee's physical condition that could affect the fit of the respirator (facial scarring, dental changes, cosmetic surgery, or obvious body weight change).

Qualitative fit tests shall be administered using procedures specified by OSHA in 29 CFR 1910.134(f), provided in Appendix F. QLFT fit testing includes the following:

1. Showing the proper way to don a respirator, proper positioning, strap tension, and determining if there is an acceptable fit.
2. Employee conducts a user seal check in accordance with manufacturer recommendations.
3. Saccharin and/or Bitrex qualitative fit testing procedures to include:
    - Normal breathing – one minute.
    - Deep breathing – one minute (slow deep breaths in order not to hyperventilate).
    - Turn head from side to side – inhale at each side – one minute.
    - Move head up and down – inhale in the up position – one minute.
    - Talk – read prepared text or count backward from 100.
    - Bend over – at waist, pretend touching toes, or jogging in place – one minute.
4. Fit testing documentation will include:
    - The name or identification of the employee tested.
    - Type of fit test performed.
    - Specific make, model, style and size of respirator tested.
    - Date of test.
    - Pass or fail results of the fit test.

At the conclusion of a QLFT conducted in-house (by EH&S personnel) for purposes of wearing a N95 Filtering Facepiece Respirator, a Respirator Certification Form (provided as Appendix G) will be completed and must be maintained on file by the Industrial Hygiene Officer.

3.6 Respirator Training

Training shall be provided so employees will understand the purpose and function of the program.

- Supervisors shall ensure personnel required to use or to supervise other personnel using respiratory protective devices are provided training.
- Personnel that are required to use respirators will be trained on the reasons for the use of respiratory protective devices and instructions on proper selection, use, and maintenance.
- Training will be provided prior to the utilization of respiratory protection in the workplace.
- Refresher training will be administered annually and in the following situations: 1) When there is a change in workplace conditions. 2) When there is a change in type of respirator used, rendering the previous training obsolete. 3) When there is indication that the respirator user did not retain the sufficient knowledge or skills necessary to properly utilize a respirator.

Supervisors and employees shall be instructed by a competent person knowledgeable in the area of respiratory protection or by electronic means approved by the Industrial Hygiene Officer. Training shall cover the general requirements of 1910.134 and include:

- Reasons to use a respirator.
- How improper fit, usage or maintenance can compromise the protective value of the respirator.
- Limitations and capacities of the respirator.
- Emergency use of the respirator including times when the respirator malfunctions.
- How to inspect, put on, remove and check the seals on the respirator.
- Proper procedures for maintenance and storage of the respirator.

- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.

3.7 Recordkeeping

The Industrial Hygiene Officer maintains a list of employees using respirators at FSC, their training records, and all fit testing documentation. Records are retained for the duration of employment and for a period of 30 years after the employee's last day of State employment.

The medical evaluations are retained by the licensed health care provider under HIPAA regulations.

3.8 Respiratory Program Evaluation

Program evaluation will be conducted to ensure compliance and ensure the following elements:

- Employee's ability to use the assigned respirator properly without interfering with effective workplace performance.
- Employee is using the correct respirator in accordance with identified task.
- Respirators being used are certified by NIOSH.
- Medical evaluation is conducted for employees using respirators when applicable.
- Respirators are maintained properly in the work area to manufacturer recommendations.
- Training of employees to recognize potential hazards during routine and emergency situations.
- Training of employees on how to properly use a respirator and what the limitations are.

Section 4: Respirator Seal Checks

Facepiece Seal Protection

Respirators with tight-fitting facepieces are to be worn in a manner that does not interfere with the facepiece seal. Employees with facial hair, or any other condition that interferes with the sealing surface of the facepiece and the face, or with valve function, are not permitted to wear tight fitting facepieces. Corrective glasses, goggles, or other personal protective equipment is to be worn in a manner that does not interfere with the seal of the facepiece to the face of the user.

User Seal Check Procedures

For all tight-fitting respirators, employees are to perform a user seal check each time that the respirator is put on, before entering an area containing hazardous atmospheres, and periodically while wearing the respirator in the contaminated area. Both the positive and negative pressure check listed below and/or the respirator manufacturer's additional recommended user seal check method is to be used.

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.

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. If the facepiece remains in its slightly collapsed and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

Section 5: Maintenance and Care of Respirators

Storing Respirators

All respirators are to be stored to protect them from damage, contamination, dust, sunlight, extreme temperature, excessive moisture, and damaging chemicals.

- Routinely used respirators, such as dust masks, should be placed in sealed Ziploc bags.
- Store respirators to prevent deformation of the facepiece and exhalation valve. Do not hang or crush respirators by cramming into small containers.
- Emergency respirators are to be kept accessible to the work area, stored in compartments or in covers that are clearly marked as containing emergency respirators, and stored in accordance with any applicable manufacturer instructions.

Cleaning and Disinfecting Respirators

Employees are to be provided with respirators that are clean, sanitary, and in good working order.

- Respirators issued for the exclusive use of an employee are to be cleaned and disinfected as often as necessary to be maintained in a sanitary condition.
- Respirators maintained for emergency use are to be cleaned and disinfected after each use.
- Disposable respirators shall be disposed of when no longer fit for use.
- Respirators used for fit testing and training will be cleaned after each use.

Respirators are to be cleaned and disinfected using the following procedures, or equivalent procedures recommended by the respirator manufacturer.

1. 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.
2. Wash components in warm (110°F, 43°C maximum) 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 running water and let drain.
3. When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:
    - Hypochlorite solution (50 parts per million (ppm) of chlorine) made by adding approximately one milliliter of laundry bleach to one liter or warm water (110°F, 43°C maximum).

- 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 warm water (110°F, 43°C maximum)
- Another commercially available cleanser of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.

4. Rinse components thoroughly in clean, warm running water and let drain. 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.
5. Components should be hand-dried with a clean lint-free cloth or air dried.
6. Reassemble facepiece, replacing filters, cartridges and canisters where necessary.
7. Test the respirator to ensure all components work properly.

Cartridge-Canister Change Procedures

Half-mask or full-face air purifying respirators equipped with chemical cartridges for protection against airborne hazards such as gasses and vapors (e.g., solvent vapors) must implement a chemical cartridge change out schedule prior to the use of the respirator to ensure that replacements occur before the end of the cartridge or canister service life.

The service life of a cartridge depends upon many factors, including environmental conditions such as humidity, breathing rate of the respirator user, cartridge filtering capacity, and the concentration of contaminants in the air.

Detection of chemicals by taste, smell, or irritation is not an acceptable indicator to replace respirator chemical cartridges. An established change out schedule will help prevent “break-through” of the chemical cartridge and will prevent detection of chemicals by taste, smell, or irritation as a result of the overuse of a saturated cartridge.

Many of the respirator manufactures such as North, 3M, and MSA, have cartridge service life estimator computer tools on their company websites to help determine acceptable change out schedules. Contact the Industrial Hygiene Officer for assistance with change schedules.

Respirator Inspection

Respirators will be inspected before each use and during cleaning. The respirator inspection will include a check of function, tightness of connection, and condition of parts such as the face piece, head strap, valves, and filters. The elastomeric parts will be checked for pliability and signs of deterioration.

Respirators that fail inspection or are otherwise found to be defective will be removed from service and repaired or disposed of.

Respirator cartridges and filters shall be marked with dates of service. Service life of the cartridge or filter must be checked during routine inspections.

Repairs to Respirators

Respirators that fail an inspection or are otherwise found to be defective are to be removed from service, and either be discarded, repaired, or adjusted. Repairs or adjustments to respirators are to be made only by persons appropriately trained and use only the manufacturer's NIOSH-approved parts designed for that particular respirator. Repairs are to be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed. Reducing and admission valves, regulations, and alarms are to be adjusted or repaired only by the manufacturer or a technician trained by the manufacturer.

Section 6: Voluntary Usage

Sometimes people may wear a respirator to avoid exposure, even if the amount of hazardous substance does not exceed the regulatory exposure limits. If you use a respirator voluntarily, you need to take certain precautions to ensure that the respirator itself does not present a hazard. At the College, the only acceptable respirator for voluntary use is the filtering facepiece respirator. Use of any other type of respirator, for example, a ½ face elastomeric respirator with cartridges, requires full compliance with a Written Respiratory Protection Program.

Employee Responsibilities for Voluntary Use

Employees who voluntarily use a respirator shall:

- Contact your supervisor for approval to use a respirator.
- Contact the Industrial Hygiene Officer when a respirator is planned to be used.
- Review the information contained in this program.
- Read and sign Appendix A for Voluntary Use of a Filtering Facepiece Respirator (i.e., N95 dust mask) and return both pages of the form to the Industrial Hygiene Officer (michallt@farmingdale.edu or via intercampus mail to Facilities Management – ATTN: Lori Michalowski).
- Read and adhere to all instructions provided by the manufacturer on use, maintenance, cleaning, care and warnings regarding the reusable respirator limitations.
- Choose respirators certified for use to protect against the contaminant of concern. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
- Keep track of the respirator so another person's respirator is not used by mistake.
- Do not wear the respirator into atmospheres containing contaminants for which the respirator is not designed. For example, a respirator designed to filter dust particles will not protect against gases, vapors, or very small solid particles of fumes or smoke.
- Inspect the respirator before each use.
- Report any significant changes or problem to the supervisor.

Employer Responsibilities for Voluntary Use

The employer, or supervising department (EH&S), has responsibilities based on the type of respirator used voluntarily. At the College, the only acceptable respirator for voluntary use is the filtering facepiece respirator. Use of any other type of respirator, for example, a ½ face elastomeric respirator with cartridges, requires full compliance with a Written Respiratory Protection Program.

The following requirements apply to Voluntary Use of Filtering Facepiece Respirators (N, R, P – 95, 99 or 100), synonymous with dust masks:

- Employers must determine that the masks themselves do not pose a hazard to workers.
- Employers must provide a copy of Appendix D of the OSHA Respiratory Protection Standard 29 CFR 1910.
- Employees must be trained on respirator use and limitations.
- Submit the voluntary Use of Filtering Facepiece Respirator Form (Appendix A) to the Industrial Hygiene Officer.
- Medical evaluation and fit-testing is not required for voluntary use of a filtering facepiece.
- Facial hair is not a restriction for voluntary use of a respirator.
- The employer is not required to pay for respirators used voluntarily.

Appendix A: Voluntary Use of Filtering Facepiece Respirator Form

Farmingdale State College
State University of New York

Employee Safety Training

VOLUNTARY USE OF FILTERING FACEPIECE RESPIRATORS

Review each of the following points with the employee (have employee initial boxes):

1. FILTERING FACEPIECE RESPIRATORS AND OSHA REQUIREMENTS

- ❑ Filtering Facepiece Respirators (also called dust masks) are considered true respirators according to OSHA. N95 refers to the NIOSH certification of the filter media that comprises the facepiece. N means that it is not oil resistant and 95 refers to it being 95% effective at filtering particles at the 0.3-micron level. N95 is the most common type of filtering facepiece respirator. Other NIOSH-certified filtering facepiece respirators include R95, P95, N100 and P100.

- ❑ Voluntary use is defined as use for employee comfort purposes only. No hazard exists that requires use of a respirator and the use of the respirator does not produce any additional hazard. At the College, the only acceptable respirator for voluntary use is the filtering facepiece respirator. Use of any other type of respirator, for example, a ½ face elastomeric respirator with cartridges, requires full compliance with a Written Respiratory Protection Program.

- ❑ If an employee is required to wear a filtering facepiece respirator (to protect against a respiratory hazard or as required by the employer), full compliance with a Written Respiratory Protection Program is required, which includes a medical evaluation by the College's approved physician or other licensed health care professional, respirator training and fit testing.

- ❑ OSHA requires that all employees voluntarily wearing filtering facepiece respirators receive basic information on respirators as provided in Appendix D of their Respirator Standard, 1910.134 (which is found at the end of this document). **– Review Appendix D with employee. Signature of this training form certifies receipt of Appendix D to 1910.134, as required by OSHA.**

2. HOW TO USE AND WEAR A FILTERING FACEPIECE RESPIRATOR

- ❑ Inspect respirators prior to use, including new units out of the box. Check for rips and tears. Make sure straps are securely attached, nose piece is attached properly, and that no obvious defects exist.

- ❑ Proper use of the respirator is important. Without it, the respirator is ineffective against the workplace contaminates. Follow manufacturers' instructions for use. **– Review manufacturer's instructions with employee. Have employee demonstrate proper use.**

- ❑ Beards and other facial hair negate the effectiveness of the respirator because they prevent an adequate seal between the respirator and the face. Skin afflictions, such as dermatitis, or scars, could affect the ability to produce a seal.

- ❑ User seal checks confirm that an adequate seal with the face is achieved when the mask is applied. User seal checks should be done every time the mask is put on and every time it is re-adjusted on the face. – **Review manufacturers' instructions for conducting user seal checks with employee.**

3. LIMITATIONS OF PPE

- ❑ Filtering facepiece respirators are only useful for protection against particulates. They are not to be used in oxygen-deficient atmospheres or atmospheres that contain hazards that are immediately dangerous to life and health (IDLH). Odors will still be noted when using the respirator because it does not filter out gases or vapors. The respirator will not provide adequate protection if a good seal with the face is not achieved.

4. CARE, MAINTENANCE, USEFUL LIFE AND DISPOSAL OF PPE

- ❑ Filtering Facepiece Respirators are considered disposable PPE. They cannot be cleaned, especially when they become wet or soiled. They cannot be shared with other employees.
- ❑ New respirators should be stored in a clean, dry location, protected from sunlight, chemicals, water, and physical damage.

Employee Name: _____ *Dept:* _____ *RAM ID:* _____

Signature: _____ *Date:* _____

OSHA's Respiratory Protection Standard, 29CFR1910.134

Appendix D to Sec. 1910.134 (Mandatory) Information for Employees Using Respirators When Not Required Under the Standard

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator's limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

Appendix B: Respirator Types and Program Requirements

Respirator Type	Description	Example Image	Fit Testing		Medical Evaluation	
			Required Use	Voluntary Use	Required Use	Voluntary Use
Filtering Facepiece (Example N95)	Half-mask covering nose and mouth, tight-fitting, air-purifying. Whole facepiece functions as the filter. Some with exhalation valve to help exhaled breath exit the facepiece. Filter out particulates only. Does not protect against gas or vapor.		Yes	No	Yes	No
Elastomeric Half-Mask	Tight-fitting, air-purifying, replaceable filters (for particulates) or cartridges or canisters (for gases and vapors) attached to a rubber or silicone facepiece that covers the nose and mouth.		Yes	No	Yes	Yes
Elastomeric Full Face-Mask	Tight-fitting, air-purifying, replaceable filters (for particulates) or cartridges or canisters (for gases and vapors) attached to a rubber or silicone facepiece that cover the eyes and entire face.		Yes	Not permitted for voluntary use	Yes	Not permitted for voluntary use

Respirator Type	Description	Example Image	Fit Testing		Medical Evaluation	
			Required Use	Voluntary Use	Required Use	Voluntary Use
Powered Air Purifying Respirator (PAPR)	Loose fitting facepiece. Blower pulls air through attached filters and then pushes the filtered air into the facepiece covering the entire face.		No	Not permitted for voluntary use	Yes	Not permitted for voluntary use
PAPR Full Face or Half Face	Tight fitting elastomeric facepiece. Blower pulls air through attached filters and then pushes the filtered air into the facepiece covering the entire face.		Yes	Not permitted for voluntary use	Yes	Not permitted for voluntary use
Supplied Airline Respirator (SAR)	Supplied clean air source from a cylinder or compressor to either a hood or a facepiece through a long hose.		Yes, for tight-fitting facemask	Not permitted for voluntary use	Yes	Not permitted for voluntary use
Self-Contained Breathing Apparatus (SCBA)	Tight-fitting elastomeric facepiece covering the whole face. Supplied air from a cylinder of compressed breathing air that is carried by the respirator user. Provides the highest level of protection.		Yes	Not permitted for voluntary use	Yes	Not permitted for voluntary use

Appendix C: Definitions

Action Level: Used by OSHA or NIOSH to express a health or physical hazard. Used to indicate the level of a harmful or toxic substance which requires medical surveillance, increased industrial hygiene monitoring, or biological monitoring.
Air Purifying Respirator: A type of respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.
Negative Pressure Respirator: A respirator that fits tightly to the face, where ambient air is drawn through the air purifying element by the pressure of the inhalation of the wearer, creating a lower air pressure inside the face piece than the outside air.
Positive Pressure Air Purifying Respirator: A respirator where ambient air is drawn through the air purifying element by a motor or similar device and pumped into the face piece, creating a greater air pressure inside the face piece than the outside air.
Atmosphere Supplying Respirators: Respirators which provide air to the wearer from a source other than the ambient air, such as an air cylinder or air compressor.
Canister or Cartridge: A container with a filter, sorbent, or catalyst, or combination of these items which removes specific contaminants from air passed through the container.
Elastomeric Respirators: Half or full facepiece, tight-fitting respirators that are made of synthetic or rubber material permitting them to be repeatedly disinfected, cleaned, and reused. They are equipped with exchangeable filter cartridges.
Exposure: The potential or actual exposure to a concentration of an airborne contaminant/pathogen that would occur if the employee is not wearing respiratory protection.
Fit Factor: A quantitative estimate of the fit of a particular respirator to a specific individual, which typically estimates the ratio of the concentrate inside the respirator when worn.
Filter: A component used in respirators to remove solid or liquid aerosols from inspired air.
Filtering Face Piece: A negative pressure particulate respirator with a filter as an integral part of the face piece or with the entire face piece composed of the filtering medium.
Fit Test: A protocol to quantitatively or qualitatively evaluate the fit of a tight-fitting respirator on an individual.
High Efficiency Particulate Air (HEPA) Filter: A filter that is at least 99.97% effective in removing monodisperse particles of 0.3 microns in diameter. The equivalent NIOSH 43 CFR 84 particulate filters are N100, R100, and P100 filters.
Hood: A respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.
Immediately Dangerous to Life and Health (IDLH): An atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from the environment. For the purposes of this policy, potential oxygen deficient atmospheres are IDLH.
Loose Fitting Face Piece: A respiratory inlet covering that is designed to form a partial seal with the face.
N-95: The N95-level respirator is a 95% particulate respirator. It is used for solid and non-oil-based particles. Applications include grinding, sanding, bagging and general processing of various minerals and other substances that do not contain oil or vapors.
Particulates: Air contaminants which are in solid or liquid states, such as dusts, fumes, mists or fibers.
Parts Per Million (PPM): A measurement of the parts of an air contaminant per million parts of air.
Permissible Exposure Limit (PEL): The maximum concentration of an air contaminant to which a worker is allowed to be exposed, in accordance with the stated exposure limits in 29 CFR Part 1910 Subpart Z.

Physician or Other Licensed Health Care Professional (PLHCP): An individual whose legally permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide or be delegated the responsibility to provide some or all of the health care services required for medical clearance in compliance with the OSHA respiratory protection standard.

Respirator Inlet Covering: That portion of a respirator that forms the protective barrier between the user's respiratory tract and an air-purifying device or breathing air source, or both. It may be a face piece, helmet, hood, suit, or mouthpiece respirator with hose clamp.

Self-Contained Breathing Apparatus (SCBA): An atmosphere-supplying respirator where the breathing air is designed to be carried by the user.

Supplied Air Respirator (SAR): An atmosphere-supplying respirator where the breathing air is supplied through an airline.

Threshold Limit Value (TLV): The value of a chemical substance is a level to which it is believed a worker can be exposed day after day for a working lifetime without adverse health effects.

Tight Fitting Face Piece: A respiratory inlet covering that forms a complete seal with the face.

User Seal Check: An action conducted by the respirator user to determine if the respirator is properly seated to the face.

Appendix D: Medical Evaluation Questionnaire

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

To the employee: Can you read (circle one): Yes No
Your employer must allow you to answer this questionnaire during normal working hours, or at a time and place that is convenient to you. To maintain confidentiality, your employer or supervisor must not look at your answers, and your employer must tell you how to deliver or send this questionnaire to the health care professional who will review it.

SECTION 1. PERSONAL INFORMATION (MANDATORY)

Date: _____ Name: _____
(first) (middle) (last)

DOB: _____ Sex (circle one): Male Female Height: ____ft. ____in. Weight: _____lbs.

Job Title: _____ Department: _____

A phone number where you can be reached by the health care professional who reviews this questionnaire:
Phone: _____ The best time to phone you at this number: _____

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

Check the type of respirator you will use (you can check more than one category)

a. _____ N, R, or P disposable respirator you will use (you can check more than one category)

b. _____ Other type (for example, half- or full-face piece type, powered-air purifying, supplied-air, self-contained breathing apparatus)

Have you worn a respirator in the last year? (circle one): Yes No
If "yes", what type(s): _____

SECTION 2 (MANDATORY): Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator. Please circle "yes" or "no" to the following.

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

2.Have you ever has any of the following conditions?

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

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

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

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

a. Shortness of breath: Yes No
b. Shortness of breath when walking fast on level ground or walking up a light hill or incline: Yes No
c. Shortness of breath when walking with other people at an ordinary pace on ground level: Yes No
d. Have to stop for breath when walking at your own pace on level ground: Yes No
e. Shortness of breath when washing or dressing yourself: Yes No
f. Shortness of breath that interferes with your job: Yes No
g. Coughing that produces phlegm (thick sputum) not associated with a cold: Yes No
h. Coughing that wakes you early in the morning: Yes No
i. Coughing that occurs mostly when you are lying down: Yes No
j. Coughing up blood in the last month: Yes No
k. Wheezing: Yes No
l. Wheezing that interferes with your job: Yes No
m. Chest pain when you breathe deeply: Yes No
n. Any other symptoms that you think may be related to lung problems: Yes No

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

a. Heart Attack:	Yes	No
b. Stroke:	Yes	No
c. Angina:	Yes	No
d. Heart Failure:	Yes	No
e. Swelling in your legs or feet (not caused by walking):	Yes	No
f. Heart Arrhythmia (heart beating irregularly):	Yes	No
g. High Blood Pressure:	Yes	No
h. Any other heart problems that you've been told about:	Yes	No

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

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

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

a. Breathing or Lung Problems:	Yes	No
b. Heart Trouble:	Yes	No
c. Blood Pressure:	Yes	No
d. Seizures (fits):	Yes	No

e. Other _____

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

a. Eye Irritation:	Yes	No
b. Skin Allergies or Rash:	Yes	No
c. Anxiety:	Yes	No
d. General Weakness or Fatigue:	Yes	No
e. Any other problem that interferes with your use of a respirator:	Yes	No

9. Would you like to talk to a health care professional who will review this questionnaire?
About the answers to this questionnaire: Yes No

Questions 10-15 below must be answered by every employee who has been selected to use either a full-facepiece respirator or a self-contained breathing apparatus (SCBA). For employees who have been selected to use other types of respirators (e.g., N95 respirators), answering these questions is voluntary.

10. Have you ever lost vision in either eye (temporarily or permanently): Yes No

11. Do you currently have any of the following vision problems?

a. Wear contact lenses:	Yes	No
b. Wear glasses:	Yes	No
c. Color blind:	Yes	No
d. Any other eye or vision problem:	Yes	No

12. Have you ever had an injury to your ears, including a broken eardrum? Yes No

13. Do you currently have any of the following hearing problems?

a. Difficulty hearing:	Yes	No
b. Wear a hearing aid:	Yes	No
c. Any other hearing or ear problem:	Yes	No

14. Have you ever had a back injury? Yes No

15. Do you currently have any of the following musculoskeletal problems?

a. Weakness in any of your arms, hands, legs, or feet:	Yes	No
b. Back pain:	Yes	No
c. Difficulty fully moving your arms and legs:	Yes	No
d. Pain or stiffness when you lean forward or backward at the waist:	Yes	No
e. Difficulties fully moving your head up and down:	Yes	No
f. Difficulty fully moving your head side to side:	Yes	No
g. Difficulty bending at your knees:	Yes	No
h. Difficulty squatting to the ground:	Yes	No
i. Climbing a flight of stairs or a ladder carrying more than 25 lbs.:	Yes	No
j. Any other muscle or skeletal problem that interferes with using a respirator:	Yes	No

The following questions are at the discretion of the Licensed Health Care Provider:

16. Has your health changed within the past year? If “yes”, describe: Yes No

Appendix E: Medical Approval Form

To be completed by a licensed health care professional and a copy provided to the employees. The employee must submit a copy of this approval form to the Industrial Hygiene Officer. The medical evaluation records must be kept confidential and retained by the Health Care Provider.

Employee Printed Name: _____ Ram ID:_____

Working Environment Form

Categorization of Workload*	Light	Moderate	Heavy
	_____	_____	_____

Will the user be working under hot conditions (temperature exceeding 77°F (circle on)): Yes No

Hazards to be protected against (e.g., infectious diseases, dust, fumes, vapors):

Type of respirator to be assigned:

Special Conditions:

Medical Approval Form

_____ This person can wear a respirator without restrictions

_____ This person can wear a respirator subject to the following restrictions:

_____ This person cannot use a respirator of the type described above.

_____ _____

Physician's Signature Date

Appendix F: Fit Testing Procedures

GENERAL 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 informed that he/she is being asked to select the respirator that provides the most 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. 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 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:
    a) Position of the mask on the nose
    b) Room for eye protection
    c) Room to talk
    d) Position of mask on face and cheeks
7. The following criteria shall be used to help determine the adequacy of the respirator fit:
    a) Chin properly placed
    b) Adequate strap tension, not overly tightened
    c) Fit across nose bridge
    d) Respirator of proper size to span distance from nose to chin
    e) Tendency of respirator to slip
    f) Self-observation in mirror to evaluate fit and respirator position
8. The test subject shall conduct a user seal check using negative and positive pressure checks as demonstrated by the program administrator. Before conducting the negative or 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 will be selected 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 stubbled beard growth, beard, mustache, or sideburns which cross the respirator-sealing surface. Any type of apparel that interferes with a satisfactory fit shall be altered or removed.
10. If a test subject exhibits difficulty in breathing during the tests, he/she 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 his or her 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. 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 five 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 the actual respirator use, which could interfere with respirator fit.

SACCHARIN SOLUTION AEROSOL PROTOCOL

A. Taste Threshold Screening

This test is conducted to assure that the person being fit tested can detect the taste of the saccharin solution at very low levels. The sensitivity test solution is a 100 to 1 dilution of the fit test solution.

NOTE: Do not eat anything sweet or drink (except plain water), chew gum or smoke 15 minutes before the fit testing procedure.

1. Explain the entire screening and testing procedure to the test subject prior to conducting of the screening test.
2. Have the subject don the hood without a respirator.

(For threshold screening and fit testing, employees shall use an enclosure about the head and shoulders that is approximately 12 inches in diameter by 14 inches tall with at least the front portion clear and that allows free movement of the head when a respirator is worn. An enclosure hood assembly, which comes with most fit testing kits, is adequate. The test enclosure shall have a three-quarter inch hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle).

3. Instruct the subject to breathe through an open mouth with tongue extended throughout the threshold screening test.
4. Using the sensitivity test solution, inject the aerosol into the hood. Inject ten squeezes of the bulb, fully collapsing and proceed with the fit test.
5. Ask the subject if they can detect the taste of the saccharin aerosol. If tasted, note the number of squeezes and proceed with the fit test.
6. If the subject does not taste the sensitivity solution, inject an additional 10 full squeezes of the aerosol into the hood. Repeat with 10 more squeezes of the aerosol into the hood if still not tasted.
7. If 30 squeezes of the nebulizer were inadequate to produce a response from the subject, the test should be ended and another type of fit test (e.g., Bitrex) must be used.
8. Remove the hood and give the subject a few minutes to clear the taste from their mouth. The individual may wash face and rinse lips and mouth with water to remove the sensitivity test solution before beginning the fit testing procedure.

B. Fit Test Procedure

NOTE: Do not eat or drink anything sweet (except plain water), chew gum or smoke 15 minutes before the fit testing procedure.

1. Have the test subject don and properly adjust the respirator per instructions provided with the respirator. The fit test is to be performed with the test subject wearing a respirator for at least five minutes.
2. Have the test subject don and position the hood and to breathe through their mouth with tongue extended throughout the fit test.
3.Using the fit test nebulizer, inject the fit test aerosol through the hole in the hood using the same number of full-bulb squeezes as required in the sensitivity test (10, 20, or 30 squeezes).
4. To maintain an adequate concentration of aerosol during test, inject one-half of the number of squeezes (5, 10, 15) used in step #3 above, every 30 seconds.
5. Instruct the subject to indicate if they detect the taste of saccharin aerosol at any time during the test.
6. After the initial aerosol is injected (step 3), instruct the test subject to perform the following exercises for 60 seconds each.

   I. Normal breathing. In a normal standing position, without talking, breathe normally.
   II. Deep breathing. In a normal standing position, breathe slowly and regularly taking caution not to hyperventilate.

III. Turning head from side-to-side. Standing in place, turn head from side to side. Do not bump the respirator on the shoulders. Have the test subject inhale when his/her head is at the extreme position on either side.

IV. Nodding head up-and-down. Be certain motions are complete and made about every second. Alert the test subject not to bump the respirator on the chest. Inhale when his/her head is in the fully up position.

V. Talking. Talk aloud and solely for several minutes. The following paragraph is called the Rainbow Passage. Reading it will result in a wild range of facial movements, and thus be useful to satisfy this requirement. Alternative passages or counting backwards from 100, which serve the same purpose, may also be used.

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.

VI. Bending over the subject shall bend over at the waist as if he/she were going to touch his/her toes.

VII. Normal breathing. In a normal standing position, without talking, breathe normally.

7. If the entire test is completed without the subject detecting the taste of the saccharin aerosol, the test is successful and the respirator is deemed adequate.

8. If the test subject does not detect the taste of the saccharin aerosol, terminate the test, (this indicates inadequate fit). Wait 15 minutes and perform the tests over with a different respirator.

CLEANING/REFILLING

Immediately after completing the test, pour the unused solutions back into their respective bottles. Rinse the nebulizers with warm water to prevent clogging. Wipe out the inside of the hood with a damp cloth or paper towel to remove any deposited Test Solution. The Nebulizers must be thoroughly rinsed in water, shaken dry and refilled at least each morning and afternoon or at least every four (4) hours.

BITRIX SOLUTION AEROSOL PROTOCOL

A. Taste Threshold Screening

This test is conducted to assure that the person being fit tested can detect the taste of the Bitrex solution at very low levels. The sensitivity test solution is a 100 to 1 dilution of the test solution.

NOTE: Do not eat or drink (except plain water), chew gum or smoke 15 minutes before the fit testing procedure.

1. Explain the entire screening and testing procedure shall to the test subject prior to conducting the screening test .

2. Have the subject don the hood without a respirator.

(For threshold screening and fit testing, employees shall use an enclosure about the head and shoulders that is approximately 12 inches in diameter by 14 inches tall with at least the front portion clear and that allows free movement of the head when a respirator is worn. An enclosure hood assembly, which comes with most fit testing kits, is adequate. The test enclosure shall have a three-quarter inch hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle).

3. Instruct the subject to breathe through an open mouth with tongue extended throughout the threshold screening test.

4. Using the sensitivity test solution, inject the aerosol into the hood. Inject ten squeezes of the bulb, fully collapsing and allowing the bulb to expand fully on each squeeze.

5. Ask the subject if they can detect the taste of the Bitrex aerosol. If tasted note the number of squeezes and proceed with the fit test.

6. If the subject does not taste the sensitivity solution, inject an additional 10 full squeezes of the aerosol into the hood. Repeat with 10 more squeezes of the aerosol into the hood if still not tasted.
7. If 30 squeezes of the nebulizer were inadequate to produce a response from the subject, the test should be ended and another type of fit tested must be used.
8. Remove the hood and give the subject a few minutes to clear the taste from their mouth. The individual may wash face and rinse lips and mouth with water to remove the sensitivity test solution before beginning the fit testing procedure.

B. Fit Test Procedure
NOTE: Do not eat or drink (except plain water), chew gum or smoke 15 minutes before the fit testing procedure.

1. Have the test subject don and properly adjust the respirator per instructions provided with the respirator. The fit test is to be performed with the test subject wearing a respirator for at least five minutes.
2. Have the test subject don and position the hood and to breathe through their mouth with tongue extended throughout the fit test.
3. Using the fit test nebulizer, inject the fit test aerosol through the hole in the hood using the same number of full-bulb squeezes as required in the sensitivity test (10, 20, or 30 squeezes).
4. To maintain an adequate concentration of aerosol during test, inject one-half of the number of squeezes (5, 10, 15) used in step #3 above, every 30 seconds.
5. Instruct the subject to indicate if they detect the taste of Bitrex aerosol at any time during the test.
6. After the initial aerosol is injected (step 3), instruct the test subject to perform the following exercises for 60 seconds each.

I. Normal breathing. In a normal standing position, without talking, breathe normally.
II. Deep breathing. In a normal standing position, breathe slowly and regularly taking caution not to hyperventilate.
III. Turning head from side-to-side. Standing in place, turn head from side to side. Do not bump the respirator on the shoulders. Have the test subject inhale when his/her head is at the extreme position on either side.
IV. Nodding head up-and-down. Be certain motion are complete and made about every second. Alert the test subject not to bump the respirator on the chest. Inhale when his head is in the fully up position.
V. Talking. Talk aloud and slowly for several minutes. The following paragraph is called the Rainbow Passage. Reading it will result in a wide range of facial movements, and thus be useful to satisfy this requirement. Alternate passages or counting backward from 100, which serve the same purpose, may also be used.
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.
VI. Bending over the subject shall bend over at the waist as if he/she were going to touch his/her toes.
VII. Normal breathing. In a normal standing position, without talking, breathe normally.

7. If the entire test is completed without subject detecting the taste of the Bitrex aerosols, the test is successful and the respirator is deemed adequate.
8. If the test subject does detect the taste of Bitrex aerosol, terminate the test, (this indicates inadequate fit). Wait 15 minutes and perform the tests over with a different respirator.

RESPIRATOR CERTIFICATION

If/when an employee passes one or both of the Fit Testing Procedures outlined in Appendix F (conducted in-house by FSC EH&S personnel), a Respirator Certification Form, provided as Appendix G, will be administered.

CLEANING/REFILLING

Immediately after completing the test, pour the unused solutions back into respective bottles. Rinse the nebulizers with warm water to prevent clogging. Wipe out the inside of the hood with a damp cloth or paper towel to remove any deposited Test Solution. The Nebulizers must be thoroughly rinsed in water, shaken dry and refilled at least each morning and afternoon or at least every four (4) hours.

Appendix G: Respirator Certification Form

Farmingdale State College
State University of New York

RESPIRATOR CERTIFICATION FORM

Name:	RAM ID:	Date of Birth:
Department::	Title:	
Home Address:		Work Phone:

I. ENVIRONMENTAL HEALTH & SAFETY CLEARANCE

- ❑ Fit for respirator use with no restrictions
- ❑ Fit for respirator use with mild restrictions or accommodations (see comments)
- ❑ Additional testing needed before fitness can be determined
- ❑ Not fit for respirator use

Comments:_____

_____ _____

Signature of EH&S Officer Date:

II. TRAINING

This employee has been trained in the appropriate use, limitations and maintenance of respirator issued.

❑ N95 Sperian/N1105/M/L	❑ N95 3M/8210/R	❑ N95 Moldex/2201/S	❑ N95 Moldex/1512/M
❑ N95 3M/8210*Plus*	❑ N95 3M/8210/S	❑ N95 Moldex/2200/M/L	❑ N95 Moldex/1513/L

Other: _____

III. FIT TESTING

The employee was fit tested for the above respirator using the following method and passed the test.

- ❑ Bitrex – Sensitivity (circle one) 10 20 30
- ❑ Saccharin – Sensitivity (circle one) 10 20 30
- ❑ Smoke
- ❑ Other _____

CERTIFICATION

- ❑ Has successfully completed EH&S clearance, training and fit testing (Sections I-III) and is certified to wear the respirator issued.
- ❑ Could not be certified for respirator use (see comments).

Comments_____

_____ _____

Signature of Instructor Date

ACKNOWLEDGEMENT

I was issued the above respirator and agree to use it accordingly to all provisions of the Voluntary Use of Filtering Face Respirators Program of Farmingdale State College and the manufacturer's guidelines.

_____ _____

Employee's Signature Date