1. **Program Statement**
   It is the policy of Rutgers University to provide a safe and healthful workplace, including minimizing risks to airborne contaminants. Respiratory protection will be provided for certain job tasks where it is not feasible to reduce airborne contaminants below regulatory limits or the airborne hazard cannot be definitively identified or quantified (e.g. chemical spills, gas releases, TB exposure in clinical settings).

2. **Reason for Program**
   This program establishes respirator selection criteria and defines respirator fit testing and training requirements. The goal of the program is to provide appropriate respiratory protection to Rutgers personnel in a manner consistent with regulatory requirements and accepted professional practice. This program is also designed to ensure compliance with the following OSHA/PEOSH standard:


3. **Who Should Read this Program**
   This program applies to all Rutgers employees who are required to wear respirators during normal work operations and during non-routine or emergency operations. This includes designated employees in the following departments:

   - Rutgers Environmental Health and Safety (REHS) – For collection of bulk asbestos samples, waste handling and segregation and emergency response incidents (i.e. hazardous substance spills, leaks, etc.)

   - Institutional Planning & Operations (IP&O) – During the following tasks:
     1) Cleaning of cooling towers by HVAC Mechanics
     2) Lead-based paint work involving “at risk” tasks defined in the *Rutgers University Lead-Based Paint Program*
     3) Spray painting and varnish refinishing

   - Fire & Emergency Services – For first response incidents involving fire, explosion, chemical release or biological exposure (i.e. blood)

   - Rutgers University Police Department (RUPD) – For first response incidents involving chemical, biological, radiological and/or nuclear attack (MSA Millennium CBRN)
• Rutgers Health Care Centers (All Campuses) – For potential exposure to tuberculosis (N95)
• Comparative Medicine Resources (CMR) – For potential exposure to animal allergens (N95)
• Plant Science/Plant Pathology – For application of pesticides in greenhouses, research farms and experimental research stations

4. The Program

I. Roles and Responsibilities

A. Rutgers Environmental Health and Safety (REHS)
   1) Serve as the overall Program Administrator for the Rutgers Respiratory Protection Program.
   2) Develop a University-wide written Respiratory Protection Program.
   3) Conduct exposure assessments of workplaces to determine the need for respiratory protection.
   4) Recommend appropriate respiratory protective equipment.
   5) Conduct fit tests for respirator wearers.
   6) Provide training on the proper use, care and storage of respirators.
   7) Maintain training records.

B. Supervisors of Employees Who Wear Respirators
   1) Serve as the Program Administrator for their department.
   2) Purchase NIOSH approved respirators.
   3) Schedule medical examinations with the Occupational Health Physician for employees who use respirators.
   4) Arrange for annual fit testing through REHS.
   5) Maintain an adequate stock of appropriate respirators, cartridges, filters and spare parts.
   6) Evaluate the effectiveness of the Respiratory Protection Program to ensure that:
      a. Respirators are properly selected and used
      b. Wearers are properly trained and fit tested
      c. Respirators are properly cleaned, maintained and stored

C. Employees Who Wear Respirators
   1) Use respirators as instructed by the manufacturer and REHS.
   2) Conduct a user seal check each time the respirator is worn.
   3) Guard against damaging the respirator during use and storage.
4) Clean the respirator after each use with appropriate disinfectant.

5) Go immediately to an area having respirable air if the respirator fails to provide proper protection.

6) Report any respirator malfunction to a supervisor or Program Administrator.

D. Occupational Health Department

1) Provide physical examinations in accordance with PEOSH regulations to determine if an employee is medically fit to wear a respirator.

2) Determine the frequency of follow-up examinations.

3) Maintain the required medical records.

II. Definitions

Employee Exposure
Exposure to a concentration of an airborne contaminant that would occur if the employee were not using respiratory protection.

Fit Test
The use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

Negative Pressure Respirator (Tight fitting)
A respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.

Positive Pressure Respirator
A respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air outside the respirator.

Qualitative Fit Test
A pass/fail fit test to assess the adequacy of respirator fit that relies on the individual’s response to the test agent.

Quantitative Fit Test
An assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

Self-Contained Breathing Apparatus (SCBA)
An atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

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

III. Procedures

A. Selection and Issuance of Respirators

1) REHS shall select the appropriate type of respiratory protection on the basis of an exposure assessment.
2) Only NIOSH approved respirators shall be selected.

3) At a minimum, respirators shall provide protection to reduce personal exposures to below the action limits for each contaminant. Higher levels of protection may be considered appropriate.

4) Respirators shall be provided by department supervisors. Employees may be requested to acknowledge receipt of the respirator.

5) Whenever feasible, individual respirators shall be issued to employees for their exclusive use.

B. Respirator Fit Testing

1) Respirators shall not be used when conditions prevent a good facepiece seal (e.g. facial hair, eyeglasses, dentures).

2) Respirator fit testing shall be performed initially before use and annually thereafter. Fit testing shall be performed by REHS.

3) Quantitative fit testing will be performed for all SCBA users and for RUPD personnel using chemical, biological, radiological and nuclear (CBRN) respirators. Quantitative fit testing will be performed using the TSI Portacount Plus Model 8020.

4) Qualitative fit test procedures shall be used for negative pressure tight fitting respirators. The Bitrex® procedure shall be the preferred method. Other methods such as isoamylacetate (banana oil), saccharin, and irritant smoke may be used at the discretion of REHS and/or Occupational/Student Health Services.

5) A positive and negative user seal check (fit check) shall be performed each time the respirator is worn, including at the start of the fit test.

C. Maintenance and Care of Respirators

1) All respirators shall be inspected routinely before each use and after cleaning and assembly.

2) Respirators shall be cleaned when needed and after each use. Cleaning and disinfection is not necessary for single use respirators. Cleaning procedures are as follows:

   a. Remove filters/cartridges and disassemble removable parts.
   b. Wash all parts in warm, soapy water. Use a mild disinfectant in the wash solution.
   c. Rinse all parts thoroughly in clean water to remove soap residue.
   d. Air dry respirator in a clean area. DO NOT dry the respirator in an oven, clothes dryer, microwave or other mechanical device.
   e. Replace any defective or missing parts.
   f. Reassemble the respirator.
   g. Store in a clean plastic bag in a suitable area away from sources of heat, excessive sunlight or chemicals.

3) Damaged or worn respirators must be repaired or replaced as necessary.
IV. Medical Monitoring

A. Initial and Periodic Medical Evaluations

An initial medical evaluation is required prior to respirator use. Medical evaluations shall be provided at no charge to the employee. The evaluation is conducted by the Occupational Health Physician and includes the following:

- Physical Examination
- Medical History (Mandatory Questionnaire)
- Pulmonary Function Test
- Chest x-ray
- Electrocardiogram
- Blood/Urine Analysis
- Tuberculin Skin Test

The frequency of periodic medical examinations for respirator wearers shall be determined by the Occupational Health Physician.

V. Training Requirements

A. Training Content and Frequency

1) All employees who wear respirators shall be trained in the proper use, limitations, and care of each type of respirator they may need.

2) Training shall be provided by REHS annually or more frequently if deemed necessary.

3) Training shall also include a review of the applicable OSHA standards, fit testing procedures and the Respiratory Protection Program.

VI. Program Evaluation

A. Random and Periodic Inspections

1) Random inspections shall be conducted to ensure that respirators are properly selected, used, cleaned and maintained.

2) Inspections shall be performed by department supervisors and REHS.

3) The Respiratory Protection Program shall be reviewed on a periodic basis by REHS.

VII. References

OSHA Respiratory Protection Standard (29 CFR 1910.134)

OSHA Instruction: Inspection Procedures for the Respiratory Protection Standard

Respirator Selection Guide (OSHA Publication)

NIOSH/OSHA Pocket Guide to Chemical Hazards

Industrial Respiratory Protection (NIOSH Publication)
Respirator Decision Logic (NIOSH Publication)

NIOSH Guide to the Selection and Use of Particulate Respirators Certified Under 42 CFR 84

Documentation of Threshold Limit Values (Current Issue)

ANSI Respirator Standard Z 88.2 (2015)