Respiratory Protection Program

July 12, 2021
I. PROGRAM GOALS & APPLICATION

The purpose of this document is to provide guidance and procedures for Georgia State University’s Respiratory Protection Program (RPP) and to serve as the required written program. The RPP is designed to ensure GSU personnel required to wear respiratory protection while performing their work duties are protected from respiratory hazards, such as potentially airborne infectious diseases or hazardous chemicals, through the proper use of respirators. It is the policy of GSU to identify and mitigate potential respiratory hazards that personnel may be exposed to. If work must be performed in atmospheres where engineering or other controls cannot reduce the hazards to safe levels, GSU provides personnel with the appropriate respirators and training to ensure their safety. This document describes procedures for identifying inhalation hazards, respiratory protection selection, medical evaluations, training, fit-testing, and respirator use and care.

The guidance and procedures in this document apply to all GSU personnel who use respirators to perform routine work duties, voluntarily or as required for tasks as assigned. Departments may have department-specific RPPs outlining procedures for their areas which are at a minimum as prescriptive as the overall GSU RPP.

This document complies with Georgia law and the policies of GSU and the Board of Regents of the University System of Georgia and serves to adhere to 29 CFR 1910.134 of the OSHA Standards. GSU is committed to strict compliance with all applicable federal regulations and guidance including and ensuring the safety and security of its personnel and the surrounding community.

II. DEFINITIONS

**Assigned Protection Factor (APF):** The minimum anticipated protection provided by a properly functioning respirator or class of respirators to a given percentage of properly fitted and trained users.

**Fit Test:** A protocol to evaluate the seal between the respirator facepiece and the user’s face.

- **Qualitative Fit Test (QLFT):** 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 (QNFT):** An assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

**High-Efficiency Particulate Air (HEPA) Filter:** A filter that is at least 99.97% efficient in removing monodisperse particles of 0.3 micrometers in diameter. The equivalent NIOSH 42 CFR 84 particulate filters are the N100, R100, and P100 filters.

**Immediately Dangerous to Life or Health (IDLH):** Conditions that pose an immediate threat to life or health or conditions that pose an immediate threat of severe exposure to contaminants, such as radioactive materials, which are likely to have adverse cumulative delayed effects on health.
Loose-Fitting Respirator: Designed to form a partial seal with the face. This may be a helmet, hood, or suit, such as those used with a powered air-purifying respirator or air-line respirator.

Maximum Use Concentration (MUC): Maximum use concentration (MUC) means the maximum atmospheric concentration of a hazardous substance from which a person can be expected to be protected when wearing a respirator and is determined by the assigned protection factor of the respirator or class of respirators and the exposure limit of the hazardous substance. The MUC usually can be determined mathematically by multiplying the assigned protection factor specified for a respirator by the NIOSH recommended exposure limit (REL), permissible exposure limit, short term exposure limit, ceiling limit, peak limit, or any other exposure limit used for the hazardous substance.

Negative Pressure Respirator: A tight-fitting respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator. This respirator requires a tight seal between the respirator and the face and/or neck in order to work properly.

Respirator: Means any device designed to provide the wearer with respiratory protection against inhalation of a hazardous atmosphere.

Respiratory Protection Program Administrator: The person responsible for all aspects of the respirator program with full authority to make decisions to ensure its success. The administrator must have sufficient knowledge (obtained by training or experience) to develop and implement the program. Preferably, he/she should have a background in industrial hygiene, safety, health care or engineering.

Tight-Fitting Respirator: Designed to form a complete seal with the face. This may be a disposable filtering facepiece, half-facepiece, or full-facepiece mask, including those used with powered air-purifying respirators, air-line respirators, and a self-contained breathing apparatus.

III. RESPONSIBILITIES

Department of Insurance & Risk Management
A. Administrative oversight of the Respiratory Protection Program (RPP), including developing the written Respiratory Protection Program and ensuring it is carried out in the workplace.
B. Evaluate the program regularly and make sure procedures are followed, respiratory protection use is monitored, and respirators continue to provide adequate protection when job conditions change.
C. Monitor and maintain current knowledge of federal regulations and make revisions and modifications to the program to address updates, gaps, and additional measures needed to ensure effectiveness of the program.
D. Review and revise this program to reflect changes in regulatory requirements as necessary.
E. Provide a copy of the written respiratory protection program to Occupational Health Partners and to GSU Departments where respiratory protection is in use.
F. Review department-specific RPPs to ensure compliance with the GSU RPP and with regulatory compliance.
Insurance & Risk Management Occupation Health & Safety Officer

A. Conduct respiratory hazard assessments to identify exposures and provide respiratory protection recommendations, including respirator type, cartridge type, and change out schedule.
B. Conduct general or personal exposure monitoring, when necessary.
C. Provide respirator training.
D. Provide respiratory fit testing services or refer respirator user to occupational health partner who performs fit testing.
E. Conduct evaluations of the workplace, as necessary, to ensure provisions of the current written program are being effectively implemented and that it continues to be effective.
F. Maintain records of medical clearance, fit tests, and training.
G. Provide consultation and guidance when necessary.

Supervisors of Respirator Users

A. Purchase NIOSH-approved respirators for designated personnel, based on Occupational Health & Safety Officer’s recommendations. Replace as needed. Supply replacement filters, cartridges, or canister elements as needed.
B. Ensure personnel required to wear respirators have received a medical evaluation, training, and annual fit tests prior to respirator use, and enforce proper use of respiratory protection. Ensure personnel refusing a medical evaluation do not work in conditions requiring respirator use.
C. Ensure users are properly maintaining respirators and inspecting respirators according to Section VI of this program. Remove respirators from service when the inspection or user identifies any condition that makes the unit unsafe to operate.
D. Ensure all filters, cartridges, and canisters are labeled and color coded with the NIOSH approval label, the label is not removed and remains legible, and the correct cartridge is used for each task.
E. Monitor the ongoing and changing needs for respiratory protection and notify Occupational Health & Safety Officer of any problem with respirator use or any changes in work procedures that would impact airborne contaminant levels.
F. Contact Occupational Health & Safety Officer to evaluate any safety concerns.

Occupational Health Partners

GSU has a contract with several occupational health facilities to perform medical clearance for respirator users. These facilities vary depending on the respirator user’s department and potential exposure. Specific facility information is found in Appendix A. Responsibilities are as follows:
A. Determine individual medical clearance by a medical questionnaire and/or medical exam to ensure personnel assigned to tasks requiring respiratory protection are physically able to perform the tasks while wearing a respirator.
B. Re-evaluate personnel under the following circumstances:
i. At an interval determined by the healthcare professional performing the evaluation.
ii. An individual reports physical symptoms related to the ability to use a respirator (e.g. wheezing, shortness of breath, chest pain, etc.).
iii. An individual is having a medical problem during respirator use.
iv. A change occurs in the workplace conditions that may result in an increased physiological burden on the individual.
C. Provide signed and dated Respirator Medical Clearance Form (Appendix E) or equivalent to employee.

Personnel Wearing Respiratory Protection
A. Complete all required medical evaluations, respirator fit-testing, and training prior to respirator use.
B. Comply with RPP requirements including using only the make, model and type of respirators for which they have been fit-tested and trained and only in accordance with that training.
C. Protect respirators from damage and ensure respirators are not modified or altered in any way other than by the changing of respirator cartridges or filters.
D. Inspect respirator according to Section V of this program and report any observed or suspected malfunctioning respirator to Supervisor.
E. Clean and disinfect respirator, as necessary and in accordance with Section VI of this program, to maintain sanitary conditions.
F. Report any change in medical status that may affect ability to use a respirator to Supervisor.
G. Annually, update respirator use certification by completing the medical evaluation, respirator fit-testing, and training.

IV. HAZARD IDENTIFICATION & RESPIRATOR SELECTION
Respirators will only be used by GSU personnel after approval by the GSU Occupational Health & Safety Officer.
A. Hazard Identification
GSU Occupational Health & Safety Officer assists Supervisors with hazard identification of respiratory hazards and uses this information to determine respiratory protection needs. As necessary, exposure monitoring will be performed to evaluate exposure to airborne hazards.
B. Respirator Selection
Respirators along with necessary cartridges will be selected based on the hazards to which GSU personnel may be exposed along with the assigned protection factor (APF) of the respirator (Appendix B). Consideration for selection will be given to other types of personal protective equipment worn that may hinder the proper fit of the respirator such as safety glasses and goggles, face shields, and protective head coverings, as well as facial hair. The physical, environmental, and chemical
conditions in the work area and the impact of respirator use on personnel will be considered, including:

i. Worker activity: Continuous or intermittent work, light, medium, or heavy work.

ii. Frequency of use: Routine, non-routine, emergency, or rescue use.

iii. Access to the hazardous area, especially the impact on the escape of personnel if an emergency occurs and access of rescue operations.

iv. Respirator characteristics, capabilities, and limitations: flow rate, compatibility of facepiece and its components with the hazard, impact of environmental conditions on ability to wear equipment (humidity/heat), and assigned protection factors (APF).

v. Physical, chemical, and toxicological properties of the contaminant(s) including physical state (gas, vapor, particulate/dust, fume and mist); oxygen deficient atmospheres; atmospheres immediately dangerous to life and health (IDLH); combination of hazard classes; odor threshold and warning properties; and eye irritant potential.

vi. The individual’s ability to wear or use the equipment and the negative impact of the equipment on operations, including facial hair, vision impairment (need for glasses, reduction in field of vision, etc.), and communication ability.
   - Respirators with tight-fitting facepieces are not to be worn by employees with:
     1. Facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function.
     2. Any condition that interferes with the face-to-facepiece seal or valve function.

All respirators used at GSU must be approved by the National Institute for Occupational Safety and Health (NIOSH). No respirator components shall be substituted, unless they are listed in the respirator’s approval by NIOSH. Any change or modification to a respirator may void the respirator approval and may adversely affect its performance.

V. VOLUNTARY USE

Georgia State University permits voluntary use of respirators where employees are not exposed to harmful concentrations of contaminants.

A. Particulate Respirator / Filtering Facepiece (NIOSH-approved)

GSU personnel wearing filtering facepieces on a voluntary basis where there is not a harmful concentration of respiratory contaminants do not need to have medical clearance, training, and fit-testing. The following must be completed for voluntary use:

i. IRM Occupational Health & Safety Officer must review the hazard to determine if respiratory protection is voluntary or required.

ii. Review and sign the Voluntary Use of Respiratory Protection Form (Appendix D).
iii. Submit a copy of the Voluntary Use of Respiratory Protection Form to Supervisor and IRM.

**B. All Other Respirator Types**
GSU personnel wearing any respirator type other than a disposable filtering facepiece for any purpose must comply with all aspects of GSU’s RPP, including medical clearance, training, and fit-testing.

**VI. RESPIRATOR USER PROCEDURES**

Prior to respirator use and annually thereafter, respirator users must obtain medical clearance, training, and fit testing.

**A. Medical Clearance**
Respirator use may place a physiological burden on the body that varies with the type of respirator worn, the job and workplace conditions in which the respirator is used, and the medical status of the wearer. Medical clearance for each type of respirator that will be used must be obtained from a physician or other licensed healthcare professional (PLHCP) prior to respirator use.

The PLHCP will review a medical evaluation questionnaire to determine whether a pulmonary function test or further testing is needed. The medical questionnaire and examinations are administered confidentially during the individual’s normal working hours or at a time and place convenient to him/her. The medical questionnaire must be administered in a manner that ensures the individual understands its content. Personnel may, if desired, discuss the questionnaire and examination results with the PLHCP.

The PLHCP will make a determination regarding the respirator user in one of three categories:

i. Cleared for unrestricted respirator use
ii. Cleared for respirator use but with restrictions
iii. Not cleared for respirator use

If the PLHCP identifies a medical condition that may place the individual’s health at increased risk when wearing a negative pressure respirator, the Occupational Health & Safety Officer will work with the PLHCP and with the individual to evaluate alternative respiratory protection.

The PLHCP will determine when subsequent routine medical evaluation is required. Additional medical evaluation will be required under the following:

i. Work conditions result in additional physiological burden.
ii. Respirator user experiences a change in health status or reports medical signs/symptoms that may impact the ability to wear a respirator.

**B. Respirator Training**
Respirator training is required prior to initial use and annually thereafter. Training will cover the following:
i. Why the respirator is necessary and how improper fit, usage, or maintenance
can compromise the protective effect of the respirator.
ii. The limitations and capabilities of the respirator.
iii. How to use the respirator in emergency situations, including situations in
which the respirator malfunctions.
iv. How to inspect, don/doff, use, and check the seals of the respirator.
v. Maintenance and storage procedures for the respirator.
vi. Recognizing medical signs and symptoms that may limit effective use of the
respirator.

Retraining must occur annually, and when the following situations occur:
   i. Changes in the workplace or type of respirator used.
   ii. Inadequacies in the respirator user’s knowledge or use of the respirator
       indicate the individual has not retained the requisite understanding or skill.
   iii. Any situation in which retraining seems necessary to ensure safe respirator
       use.

C. Fit Testing
Personnel wearing tight-fitting respirators will need to pass an annual fit test. Fit testing
will not be performed until the respirator user has obtained proper medical clearance
and has completed respirator training. Respirator users must be fit tested with the
same make, model, style, and size of respirator that will be worn during work activities.

Fit testing will occur under the following conditions:
   i. Prior to initial use.
   ii. Annually.
   iii. A different respirator (size, style, make, or model) is used.
   iv. A condition occurs which may alter the shape of the face:
      a. Weight change of 10 pounds or more.
      b. Significant facial scarring in the area of the facepiece seal.
      c. Significant dental changes (e.g. multiple extractions without prosthesis
         or dentures).
      d. Reconstructive or cosmetic surgery.
      e. Any other condition that may interfere with facepiece sealing.

Fit testing methods include the following:
   i. An OSHA-approved quantitative fit test utilizing a TSI™ Portacount®
      Respirator Fit Tester or OHD Quantifit is the GSU preferred method and will
      be offered annually on campus.
   ii. Quantitative fit testing can also be obtained from certain Occupational Health
       Partners as identified in Appendix A.
   iii. Qualitative fit testing utilizing irritant smoke, saccharin, or bitrex is acceptable
       for certain respirator users when a quantitative fit test is not available.

If an individual does not achieve an acceptable fit with a given make, model or size of
facepiece, the fit testing will be repeated with other makes, models and sizes until an
acceptable fit is achieved.
Loose-fitting respirators, such as Powered Air-Purifying Respirators (PAPRs), in which the helmet is designed to form only a partial seal with the wearer’s face or hoods which seal loosely around the wearer’s neck or shoulders, do not require fit testing.

**VII. RESPIRATOR USE AND MAINTENANCE**

**A. User Seal Checks**

A user seal check will be performed each time a tight-fitting respirator is put on to ensure an adequate seal is achieved. Either the positive and negative pressure checks listed below or the respirator manufacturer’s recommended user seal check method will be used.

i. Positive pressure check:
   a. Close off the exhalation valve and exhale gently into the facepiece.
   b. 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.
   c. 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.

ii. Negative pressure check:
   a. 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.
   b. 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.
   c. 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.

**B. Respirator Storage**

i. Respirator users will store respirators to protect from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals.

ii. Respirators will be packed or stored to prevent deformation of the facepiece and exhalation valve.

iii. Respirators should not be stored in a hanging position.

**C. Respirator Cleaning Schedule**

Respirators will be cleaned per the following:

i. Respirators assigned to individuals will be cleaned and disinfected as often as necessary to be maintained in sanitary condition.
ii. Shared respirators and SCBAs will be cleaned and disinfected after each use.

D. Respirator Inspection

Inspection Frequency:

i. Respirators used in routine situations: before each use and during cleaning.

ii. Respirators maintained for use in emergency situations, including self-contained breathing apparatus: before and after each use, but at least monthly, in accordance with the manufacturer's recommendations.

Inspection Components:

i. A check of respirator function.

ii. Tightness of connections.

iii. Condition of the various parts including, but not limited to, the following:
   a. Facepiece
   b. Head straps
   c. Valves
   d. Connecting tube
   e. Cartridges, canisters or filters; and
   f. A check of elastomeric parts for pliability and signs of deterioration.

i. Self-contained breathing apparatus:
   a. Air and oxygen cylinders shall be maintained in a fully charged state and shall be recharged when the pressure falls to 90% of the manufacturer's recommended pressure level.
   b. Regulator and warning devices function properly.

Post-Inspection

i. Respirators that fail an inspection or are otherwise found to be defective must be removed from service and discarded or repaired according to the following procedures:
   a. Repairs or adjustments are to be made only by persons appropriately trained to perform such operations;
   b. Repairs or adjustments must only use the respirator manufacturer's NIOSH-approved parts designed for the respirator;
   c. Repairs will be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed; and
   d. Reducing and admission valves, regulators, and alarms will be adjusted or repaired only by the manufacturer or a technician trained by the manufacturer.

E. Cartridge Change-Out Schedule

Cartridges will be changed out per the following schedule:

i. At the frequency established during the respiratory hazard assessment.

ii. If present, an end-of-service life indicator is activated.

iii. Immediately if chemical warning properties, such as smell or taste, are detected.
VIII. RECORDKEEPING

A. Respirator User’s Medical Clearance
   i. Record held by Occupational Health & Safety Officer.
   ii. Record maintained for duration of employment plus 30 years.

B. Training
   i. Record held by Occupational Health & Safety Officer.
   ii. Record maintained until retraining is completed.

C. Fit Testing
   i. Fit test record to include the following: respirator user name; type of fit test performed; specific make, model, style, and size of respirator tested; date of test; pass/fail results for qualitative fit tests or fit factor and strip chart recording or other recording of test results for quantitative fit tests.
   ii. Record held by Occupational Health & Safety Officer.
   iii. Record maintained until the next fit test is administered.

D. Inspections
   i. Record held in department by Supervisor.

E. Written Respirator Program
   i. Written copy held by Occupational Health & Safety Officer.
   ii. Reviewed and revised to reflect changes in program content and regulatory requirements, as necessary, or at least annually.

IX. CONTACT INFORMATION

For questions and for health-related concerns/symptoms contact GSU’s Department of Insurance & Risk Management, Geraine Marshall at gmarshall@gsu.edu or 404-413-9547.
X. APPENDICES

Appendix A: Occupational Health Partners

There are 14 Concentra locations in the metropolitan Atlanta area. Medical clearance for respirator use can be obtained at any location. Specific locations can be found at concentra.com.

The following Concentra locations can perform quantitative fit testing:

Concentra Hapeville
3580 Atlanta Ave
Hapeville, GA 30354
Mon – Fri: 7 am – 12 am, Sat – Sun: 10 am – 6 pm
404.768.3351
Fax: 404.763.2002

Concentra Johns Creek
10820 Abbotts Bridge Rd. Suite 3000
Johns Creek, GA 30097
Mon – Fri: 8 am – 5:30 pm
Sat: 10 am – 3 pm
770.441.0444
Fax: 770.449.7962
## Appendix B: Respirator Types

<table>
<thead>
<tr>
<th>Respirator Type</th>
<th>APF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate respirator/ filtering facepiece (NIOSH-approved):</td>
<td>10</td>
</tr>
<tr>
<td>• e.g. N95, N99, P100</td>
<td></td>
</tr>
<tr>
<td>Elastomeric, air-purifying respirator:</td>
<td></td>
</tr>
<tr>
<td>• Quarter-mask</td>
<td>5</td>
</tr>
<tr>
<td>• Half-facepiece</td>
<td>10</td>
</tr>
<tr>
<td>• Full-facepiece</td>
<td>50</td>
</tr>
<tr>
<td>Powered air-purifying respirator (PAPR):</td>
<td></td>
</tr>
<tr>
<td>• Loose-fitting facepiece</td>
<td>25</td>
</tr>
<tr>
<td>• Half-facepiece</td>
<td>50</td>
</tr>
<tr>
<td>• Full-facepiece</td>
<td>1000</td>
</tr>
<tr>
<td>• Hood or helmet</td>
<td>25/1000*</td>
</tr>
<tr>
<td>*Note:</td>
<td></td>
</tr>
<tr>
<td>PAPRs with helmets/hoods may receive an APF of 1000 only when you have</td>
<td></td>
</tr>
<tr>
<td>evidence that testing of these respirators demonstrates performance at a</td>
<td></td>
</tr>
<tr>
<td>level of protection of 1,000 or greater. Such evidence must be provided by the</td>
<td></td>
</tr>
<tr>
<td>respirator manufacturer. This level of performance can best be demonstrated by</td>
<td></td>
</tr>
<tr>
<td>performing a workplace protection factor (WPF) or simulated workplace</td>
<td></td>
</tr>
<tr>
<td>protection factor (SWPF) study or equivalent testing.</td>
<td></td>
</tr>
<tr>
<td>Air-line respirator:</td>
<td></td>
</tr>
<tr>
<td>• Half-facepiece and designed to operate in demand mode</td>
<td>10</td>
</tr>
<tr>
<td>• Loose-fitting facepiece and designed to operate in continuous flow mode</td>
<td>25</td>
</tr>
<tr>
<td>• Half-facepiece and designed to operate in continuous flow mode</td>
<td>50</td>
</tr>
<tr>
<td>• Half-facepiece and designed to operate in demand-pressure or other positive-pressure mode</td>
<td>50</td>
</tr>
<tr>
<td>• Full-facepiece and designed to operate in demand mode</td>
<td>1000</td>
</tr>
<tr>
<td>• Full-facepiece and designed to operate in continuous flow mode</td>
<td>1000</td>
</tr>
<tr>
<td>• Full-facepiece and designed to operate in demand-pressure or other positive-pressure mode</td>
<td>25/1000*</td>
</tr>
<tr>
<td>• Helmet or hood and designed to operate in continuous-flow mode</td>
<td></td>
</tr>
<tr>
<td>*Note:</td>
<td></td>
</tr>
<tr>
<td>Air-line respirators with helmets/hoods designed to operate in continuous</td>
<td></td>
</tr>
<tr>
<td>flow may receive an APF of 1000 when you have evidence that testing of these</td>
<td></td>
</tr>
<tr>
<td>respirators demonstrates performance at a level of protection of 1,000 or</td>
<td></td>
</tr>
<tr>
<td>greater. Such evidence must be provided by the respirator manufacturer. This</td>
<td></td>
</tr>
<tr>
<td>level of performance can best be demonstrated by performing a workplace</td>
<td></td>
</tr>
<tr>
<td>protection factor (WPF) or simulated workplace protection factor (SWPF) study</td>
<td></td>
</tr>
<tr>
<td>or equivalent testing.</td>
<td></td>
</tr>
<tr>
<td>Self-contained breathing apparatus (SCBA) with a tight-fitting:</td>
<td></td>
</tr>
<tr>
<td>• Half-facepiece and designed to operate in demand mode</td>
<td>10</td>
</tr>
<tr>
<td>• Full-facepiece and designed to operate in demand mode</td>
<td>50</td>
</tr>
<tr>
<td>• Full-facepiece and designed to operate in pressure-demand mode or other</td>
<td>10,000</td>
</tr>
<tr>
<td>positive pressure mode (e.g. open/closed circuit)</td>
<td></td>
</tr>
<tr>
<td>• Helmet or hood and designed to operate in demand mode</td>
<td>50</td>
</tr>
<tr>
<td>• Helmet or hood and designed to operate in pressure-demand or other positive-pressure mode (e.g. open/closed circuit)</td>
<td>10,000</td>
</tr>
<tr>
<td>Combination respirators:</td>
<td></td>
</tr>
<tr>
<td>• When using a combination respirator, such as an air-line respirator with an</td>
<td></td>
</tr>
<tr>
<td>air-purifying filter, you must make sure the APF is appropriate to the mode</td>
<td></td>
</tr>
<tr>
<td>of operation in which the respirator is used</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix C: Respirator Cartridge Selection

<table>
<thead>
<tr>
<th>Color</th>
<th>Type of Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>Organic vapor</td>
</tr>
<tr>
<td>White</td>
<td>Acid gas (chlorine, hydrogen chloride, sulfur dioxide, hydrogen fluoride, chlorine dioxide)</td>
</tr>
<tr>
<td>Yellow</td>
<td>Organic vapor &amp; acid gas</td>
</tr>
<tr>
<td>Green</td>
<td>Ammonia &amp; methylamine</td>
</tr>
<tr>
<td>Olive Green</td>
<td>Organic vapor &amp; formaldehyde</td>
</tr>
<tr>
<td>Orange</td>
<td>Mercury vapor &amp; chlorine gas</td>
</tr>
<tr>
<td>Purple (Magenta)</td>
<td>Dust, fumes, mists, asbestos, radionucleotides, &amp; highly toxic particulates (P100 filter)</td>
</tr>
<tr>
<td>Black/Purple</td>
<td>Organic vapor &amp; P100 combination</td>
</tr>
<tr>
<td>White/Purple</td>
<td>Acid gas &amp; P100 combination</td>
</tr>
<tr>
<td>Yellow/Purple</td>
<td>Organic vapor/acid gas &amp; P100 combination</td>
</tr>
<tr>
<td>Green/Purple</td>
<td>Ammonia/Methyl amine &amp; P100 combination</td>
</tr>
<tr>
<td>Olive Green/Purple</td>
<td>Organic vapor/formaldehyde &amp; P100 combination</td>
</tr>
<tr>
<td>Pre-filters</td>
<td>Use with dusts, fumes, mists, pesticides, &amp; plants</td>
</tr>
</tbody>
</table>

*This table is to be used as a guide when selecting the appropriate respirator cartridge. Selections should be confirmed with the manufacturer to ensure appropriate color is chosen for the contaminant.*
Appendix D: Voluntary Use of Respiratory Protection Form

Some Georgia State University personnel may choose to wear NIOSH-approved particulate respirators/filtering facepieces (e.g., N-95 or P-100 disposable dust masks) on a voluntary basis during activities that involve exposures to low-level, non-hazardous nuisance dust or other similar particulates. According to OSHA and the Georgia State University Respiratory Protection Program, anyone wearing a filtering facepiece voluntarily must be provided with the following information:


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:

i. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator’s limitations.

ii. 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.

iii. 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.

iv. Keep track of your respirator so that you do not mistakenly use someone else’s respirator.

The filtering facepiece respirator you have elected to use is approved, when fitted properly, for use against nuisance, non-hazardous particulate (e.g. fiberglass, drywall dust, sawdust, dirt, pollen, animal dander). It will not provide protection from any chemical vapors (i.e. those associated with spray paints or solvents). It is not intended for use during work that may involve exposure to airborne asbestos fibers, silica dust, or heavy metal particles; work that may involve these substances should be reviewed by the Occupational Health & Safety Officer before the project proceeds.

For questions in non-research areas, contact Geraine Marshall, Occupational Health & Safety Officer, at gmarshall@gsu.edu or 404-413-9547. For questions in research areas, contact Danielle Daniely, Director, Research Safety Programs/High Containment Laboratories, ddaniely@gsu.edu or 404-413-3567.

Please complete the section below:

Print Name: ____________________________ Email Address: ____________________________
Job Title: ____________________________ Work Phone Number: ____________________________
Department: ____________________________ PI/Supervisor: ____________________________
Type of Mask: ____________________________ Location of use: ____________________________
Reason for using mask (describe nature of work and particulate of concern): ____________________________

I have read and understood the information provided above:

Employee Signature: ____________________________ Date: ____________________________

16 of 18 GSU Respiratory Protection Program July 2021
Appendix E: Respirator Medical Clearance Form

Respirator use may place a physiological burden on the body that varies with the type of respirator worn, the job and workplace conditions in which the respirator is used, and the medical status of the wearer. Medical clearance from a physician or other licensed health care professional (PLHCP) must be obtained prior to respirator use.

The following person has received a medical evaluation for respirator use:

Name __________________________________________ Panther ID ___________________
Department _________________________________________________________________
Email ______________________________________________ Phone ___________________

The identified individual is approved to wear the following (check all that apply):

- Filtering facepiece (e.g. N95, P100) □ Without restrictions □ With restrictions ________________
- Half-mask, air purifying respirator □ Without restrictions □ With restrictions ________________
- Full-face, air purifying respirator □ Without restrictions □ With restrictions ________________
- Powered air purifying respirator □ Without restrictions □ With restrictions ________________
- SCBA □ Without restrictions □ With restrictions ________________

If applicable, the following workplace conditions will result in additional physiological burden: ________
_____________________________________________________________________________________

Approval Date _________________________
Approval Expiration (Follow-up evaluation needed) _________________________________

PLHCP:

Name _________________________________ Signature ________________________________

Company _________________________________________________________________________

Respirator users must have a medical evaluation when any of the following occur:

- Prior to initial use of respirator
- PLHCP determines that a follow-up examination is needed
- Work conditions result in additional physiological burden
- Respirator user experiences a change in health status or reports medical signs/symptoms that may impact the ability to wear a respirator

This completed form (or its equivalent) must be provided by the respirator user before the fit test organizers will conduct respirator fit testing.
Appendix F: Respirator Fit Test Form

Respirator users must be fit tested with the same make, model, style, and size of respirator that will be worn during work activities.

The following person has been fit-tested and trained in the use, limitation, and maintenance of respirators:

Name ______________________________________________ Panther ID ______________________
Department ________________________________________________________________________
Email ______________________________________________ Phone __________________________

<table>
<thead>
<tr>
<th>Respirator Seal Checks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Negative Pressure</strong></td>
</tr>
<tr>
<td>□ Pass</td>
</tr>
<tr>
<td>□ Pass</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Method</th>
<th>Quantitative (QNFT)</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualitative (QLFT)</td>
<td>Quantitative (QNFT)</td>
<td>Tests</td>
</tr>
<tr>
<td>□ Bitrex</td>
<td>□ PortaCount</td>
<td>Normal breathing</td>
</tr>
<tr>
<td>□ Irritant Smoke</td>
<td>Model __________</td>
<td>Deep breathing</td>
</tr>
<tr>
<td>□ Isoamyl Acetate</td>
<td>□ Quantifit</td>
<td>Turn head (side to side)</td>
</tr>
<tr>
<td>□ Saccharin</td>
<td>Model __________</td>
<td>Nod head</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recite rainbow passage or equivalent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grimace (QNFT only)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bend over</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Normal breathing</td>
</tr>
</tbody>
</table>

Respirator Type: ________________________________
Manufacturer & Model: ____________________________
Size: ________________________________

Date Tested/Trained: ____________________________
Overall Results: □ Pass □ Fail

Fit Factor (QNFT only): ________________________

Tester Name: ________________________________

Respirator users must be fit tested when any of the following occur:
• Prior to initial use of respirator
• Annually
• A different respirator (size, style, make, or model) is used
• Respirator user experiences physical changes that interfere with facepiece sealing. Such conditions include, but are not limited to, the following: weight change of 10 pounds or more; significant facial scarring in the area of the facepiece seal; significant dental changes (e.g. multiple extractions without prosthesis or dentures); reconstructive or cosmetic surgery

Respirator User Signature __________________________________________________________