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## Respiratory Protection Program

The Respiratory Protection Program specifies standard operating procedures to protect each construction site employee from respiratory hazards, according to the requirements of 29 CFR 1910.134. Respirators are to be used only where engineering control of respirator hazards is not feasible, while engineering controls are being installed, or in emergencies.

### Administrative Duties

At Pace University, the Respiratory Protection Program Administrator is Brian Anderson, Director of Environmental Health & Safety (EH&S). Environmental Health & Safety is solely responsible for all facets of the program and has full authority to make necessary decisions to ensure success of this program. The Program Administrator will develop written detailed instructions covering each of the basic elements in this program, and is the sole person authorized to amend these instructions.

The Director of Environmental Health & Safety is also qualified, by appropriate training and experience that is commensurate with the complexity of the program, to administer or oversee our Respiratory Protection Program and conduct the required evaluations of program effectiveness.

Employees may review a copy of our Respiratory Protection Program. It is located in West Hall 118. Our Program Administrator, Brian Anderson, reviews this program periodically to ensure its effectiveness. Only the Program Administrator may amend the written program.

### Respirator Selection

Respirators are selected on the basis of respiratory hazards to which the worker is exposed and workplace and user factors that affect respirator performance and reliability. All selections are made by

immediately dangerous to life and health (IDLH) if you cannot identify or reasonably estimate employee exposure.

- x Select respirators from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

Selection procedures are included in the respirator program. Outside consultation, manufacturer's assistance, and other recognized authorities will be consulted if there is any doubt regarding proper selection.

7 K H 8 Q L Y selection procedures include coverage of the following OSHA requirements:

### *Selection Procedure Checklist*

When selecting any respirator in general:

- x Select and provide respirators based on respiratory hazard(s) to which a worker is exposed and workplace and user factors that affect respirator performance and reliability.
- x Select a NIOSH-certified respirator. (NIOSH stands for the National Institute for Occupational Safety and Health)
- x Identify and evaluate the respiratory hazard(s) in the workplace, including a reasonable estimate of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form. Consider the atmosphere to be immediately dangerous to life or health (IDLH) if you cannot identify or reasonably estimate employee exposure.
- x Select respirators from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

When selecting respirators for IDLH atmospheres:

- x Provide these respirators:
  - o A full facepiece pressure demand self-contained breathing apparatus (SCBA) certified by NIOSH for a minimum service life of thirty minutes, or
  - o A combination full facepiece pressure demand supplied-air respirator Self-contained breathing apparatus (SAR) with auxiliary self-contained air supply.
- x Provide respirators NIOSH-certified for escape from the atmosphere in which they will be used when they are used only for escape from IDLH.

x Select a respirator that meets or exceeds the required level of employee protection by

N95	Health Services- patient care
CcrOV100	Theater set design- paint application and dust

Only NIOSH-certified respirators are selected and used. Where practicable, the respirators will be assigned to individual workers for their exclusive use.

## Medical Evaluations

A medical evaluation to determine whether an employee is able to use a given respirator is an important element of an effective Respiratory Protection Program and is necessary to prevent injuries, illnesses, and even, in rare cases, death from the physiological burden imposed by respirator use.

At Pace University, persons will not be assigned to tasks requiring use of respirators nor fit tested unless it has been determined that they are physically able to perform the work and use the respirator.

The University Health Care Unit (Goldstein Fitness Center Room 125 in Pleasantville and 41 Park Row Suite 313 in New York) will perform medical evaluations using a medical questionnaire found in [Sections 1 and 2, Part A of Appendix C of 29 CFR 1910.134](#).

All medical questionnaires and examinations are confidential and handled during the employee's normal working hours or at a time and place convenient to the employee. The medical questionnaire is administered so that the employee understands its content. All employees are provided an opportunity to discuss the questionnaire and examination results with their physician or other licensed health care professional (PLHCP).

Before any initial examination or questionnaire is given, departments must supply the PLHCP with the following information so that he/she can make the best recommendation concerning an employee's ability to use a respirator:

- x Type and weight of the respirator to be used by the employee;
- x Duration and frequency of respirator use (including use for rescue and escape);
- x Expected physical work effort;
- x Additional protective clothing and equipment to be worn;
- x Temperature and humidity extremes that may be encountered.

Once the PLHCP determines whether the employee has the ability to use or not use a respirator, he/she sends EH&S a written recommendation containing only the following information:

- x Limitations on respirator use related to the medical condition of the employee, or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator;
- x The need, if any, for follow-up medical evaluations; and

- x A statement that the PLHCP has provided the employee with a copy of the PLHCP's written recommendation.

*Follow-up medical examination:*

A follow-up medical examination will be provided if a positive response is given to any question among questions 1 through 8 in Section 2, Part A of [Appendix C of 29 CFR 1910.134](#) or if an

In a quantitative respirator fit test (QNFT), the adequacy of respirator fit is assessed by measuring the amount of leakage into the respirator, either by generating a test aerosol as a test atmosphere, using ambient aerosol as a test agent, or using controlled negative pressure to measure the volumetric leak rate. Appropriate instrumentation is required to quantify respirator fit in QNFT.

Pace University makes sure those employees are fit tested with the same make, model, style, and size of respirator that will be used:

- x Before any of our employees are required to use any respirator with a negative or positive pressure tight-fitting facepiece;

x



3. The test subject shall be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.

4. The test subject shall be instructed to hold each chosen facepiece up to the face and eliminate those that

9. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard, mustache or sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed.

10. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician or other licensed health care professional, as appropriate, to determine whether the test subject can wear a respirator while performing her or his duties.

11. If the employee finds the fit of the respirator unacceptable, the test subject shall be given the opportunity to select a different respirator and to be retested.

12. Exercise regimen. Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure. The description of the process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.



inches tall with at least the front portion clear and that allows free movements of the head when a respirator is worn. An enclosure substantially similar to the 3M hood assembly, parts # FT 14 and # FT 15 combined, is adequate.

(2) The test enclosure shall have a 3/4-inch (1.9 cm) hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle.

(3) The test subject shall don the test enclosure. Throughout the threshold screening test, the test subject shall breathe through his/her slightly open mouth with tongue extended. The subject is instructed to report when he/she detects a sweet taste.

(4) Using a DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent, the test conductor shall spray the threshold check solution into the enclosure. The nozzle is directed away from the nose and mouth of the person. This nebulizer shall be clearly marked to distinguish it from the fit test solution nebulizer.

(5) The threshold check solution is prepared by dissolving 0.83 gram of sodium saccharin USP in 100 ml of warm water. It can be prepared by putting 1 ml of the fit test solution (see (b)(5) below) in 100 ml of distilled water.

(6) To produce the aerosol, the nebulizer bulb is firmly squeezed so that it collapses completely, then released and allowed to fully expand.

(7) Ten squeezes are repeated rapidly and then the test subject is asked whether the saccharin can be tasted. If the test subject reports tasting the sweet taste during the ten squeezes, the screening test is completed. The taste threshold is noted as ten regardless of the number of squeezes actually completed.

(8) If the first response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin is tasted. If the test subject reports tasting the sweet taste during the second ten squeezes, the screening test is completed. The taste threshold is noted as twenty regardless of the number of squeezes actually completed.

(9) If the second response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin is tasted. If the test subject reports tasting the sweet taste during the third set of ten squeezes, the screening test is completed. The taste threshold is noted as thirty regardless of the number of squeezes actually completed.

(10) The test conductor will take note of the number of squeezes required to solicit a taste response.

(11) If the saccharin is not tasted after 30 squeezes (step 10), the test subject is unable to taste saccharin and may not perform the saccharin fit test.

Note to paragraph 2. (a):If the test subject eats or drinks something sweet before the screening test, he/she may be unable to taste the weak saccharin solution.

(12) If a taste response is elicited, the test subject shall be asked to take note of the taste for reference in the fit test.

(13) Correct use of the nebulizer means that approximately 1 ml of liquid is used at a time in the nebulizer body.

(14) The nebulizer shall be thoroughly rinsed in water, shaken dry, and refilled at least each morning and afternoon or at least every four hours.

(b) Saccharin solution aerosol fit test procedure.

(1) The test subject may not eat, drink (except plain water), smoke, or chew gum for 15 minutes before the test.

(2) The fit test uses the same enclosure described in 3. (a) above.

(3) The test subject shall don the enclosure while wearing the respirator selected in section I. A. of this section. The respirator shall be properly adjusted and equipped with a particulate filter(s).

(4) A second DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent is used to spray the fit test solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the screening test solution nebulizer.

(5) The fit test solution is prepared by adding 83 grams of sodium saccharin to 100 ml of warm water.

(6) As before, the test subject shall breathe through the slightly open mouth with tongue extended, and report if he/she tastes the sweet taste of saccharin.

(7) The nebulizer is inserted into the hole in the front of the enclosure and an initial concentration of saccharin fit test solution is sprayed into the enclosure using the same

(10) The test subject shall indicate to the test conductor if at any time during the fit test the taste of saccharin is detected. If the test subject does not report tasting the saccharin, the test is passed.

(11) If the taste of saccharin is detected, the fit is deemed unsatisfactory and the test is failed. A different respirator shall be tried and the entire test procedure is repeated (taste threshold screening and fit testing).

(12) Since the nebulizer has a reservoir, the test conductor shall ensure that the nebulizer is empty during the test.

- o To wash their faces and respirator facepieces as necessary to prevent eye or skin irritation associated with respirator use; or
- o If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece; or
- o To replace the respirator or the filter, cartridge, or canister elements.
- x If the employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece, replace or repair the respirator before allowing the employee to return to the work area.

*Procedures for IDLH Atmospheres*

Ensure that:

- x One employee or, when needed, more than one employee is located outside the IDLH atmosphere;
- x retp4 ( tovidmpl)-3 ff4 (pa)4 (ic-3 (on a)4 t e)-1mplhesp oentedetspi tu-5 (mplhe)MC /P A MCID 7 BDC9
- x Visuaa6 -13.1yee trT\*(e)d-5 (mplhe)sratat to

The respirators are cleaned and disinfected at the following intervals:

Respirator type:	Are cleaned and disinfected at the following interval:
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Any one of our respirator inspections includes a check:

- x For respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the facepiece, head straps, valves, connecting tube, and cartridges, canisters or filters; and
- x Of elastomeric parts for pliability and signs of deterioration.

### *Repairs*

Respirators that fail an inspection or are otherwise found to be defective are removed from service, and are discarded or repaired or adjusted in accordance with the following procedures:

- x Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations and only with the respirator manufacturer's NIOSH-approved parts designed for the respirator;
- x Repairs must be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed; and
- x Reducing and admission valves, regulators, and alarms must be adjusted or repaired only by the manufacturer or a technician trained by the manufacturer.

### *Discarding of respirators*

Respirators that fail an inspection or are otherwise not fit for use and cannot be repaired must be discarded.

### Training

University and the employee can demonstrate that he/she has knowledge of those elements, then that employee is not required to repeat such training initially.

Yet, we do require all of our employees to be retrained annually and when the following situations occur:

- x Changes in the workplace or the type of respirator render previous training obsolete;
- x Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill; or
- x Any other situation arises in which retraining appears necessary to ensure safe respirator use.

*Seven basic elements:*

Our employees are trained sufficiently to be able to demonstrate knowledge of at least these seven elements:

1. Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator.
2. What the limitations and capabilities of the respirator are.
3. How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions.
4. How to inspect, put on, remove, use, and check the seals of the respirator.
5. What the procedures are for maintenance and storage of the respirator.
6. How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
7. The general requirements of 29 CFR 1910.134.

The basic advisory information on respirators, as presented below is provided by our Program Administrator in any written or oral format, to employees who wear respirators when such use is not required by the regulations or by our company:

*Information for employees using respirators (n)]Tk5 (e)4 4 >>,tiv.ois23dse.1.rmation-3 (a9213.83 TD [(Admini*

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators 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. .HHS WUDFN RI \RXU UHVSLUDWRU VR WKDW \RX GR QR

### Program Evaluation

It is inherent in respirator use that problems with protection, irritation, breathing resistance, comfort, and other respirator-related factors occasionally arise in most respirator protection

## Appendices

### *Appendix 1--References*

The following documents are helpful references:

- x [29 CFR 1910.134](#), Respiratory Protection, and Appendices,
- x [42 CFR 84](#), Approval of Respiratory Protective Devices,
- x [ANSI Z88.2](#), Respiratory Protection,
- x [NIOSH Guide to Industrial Respiratory Protection](#)-1987
- x [NIOSH Guide to the Selection and Use of Particulate Respirators](#) Certified Under 42 CFR 84 (4/23/96).

*Appendix 2<sup>2</sup> Sample Training Certificates*

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*Appendix 3<sup>2</sup> Sample Fit Test Results Documentation*

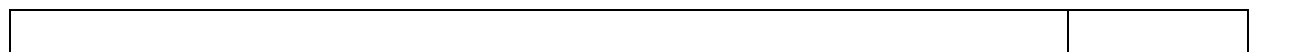
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*Appendix 4<sup>2</sup> OSHA Respirator Medical Evaluation Questionnaire*

OSHA Respirator Medical Evaluation Questionnaire  
(Mandatory)(Appendix C to Sec. 1910.134)








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