

Palm Beach State College
Florida's First Public Community College



**RESPIRATORY PROTECTION
PROGRAM**

Revised: November, 2017

PALM BEACH STATE COLLEGE RESPIRATORY PROTECTION PROGRAM

1. PURPOSE

It is the policy of Palm Beach State College to provide employees with a safe and healthful work environment. The primary objective of the Respiratory Protection Program is to prevent harmful exposure to occupational air contaminants when engineering and administrative controls are not feasible or effective. The Occupational Safety and Health Standards for General Industry found in Title 29, Code of Federal Regulations, Part 1910, paragraph 134, abbreviated 29 CFR 1910.134, establish permissible practices and requirements for this program. The Safety & Risk Manager will function as the Program administrator. A copy of the current written Respiratory Protection Program will be available in the Safety & Risk Management Department and online at the Safety & Risk Management web site.

2. DEFINITIONS

Air-purifying respirator – A respirator with an air-purifying filter, cartridge or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

Fit test – The use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual. Qualitative fit-testing will be the preferred method of fit-testing.

Physician or other licensed health care professional (PLHCP) – means 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 by 29 CFR 1910.134(e).

Powered air-purifying respirator (PAPR) – An air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

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.

Respiratory 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 facepiece, helmet, hood, suit, or a mouthpiece respirator with nose clamp.

Tight-fitting facepiece – A respiratory inlet covering that forms a complete seal with the face.

3. RESPONSIBILITIES

- Pursuant to the requirements of 29 CFR 1910.137 (d)(1)(iii), Palm Beach State College is responsible for identifying and evaluating the respiratory hazard(s) in the workplace,

including a reasonable estimate of employee exposure to such hazard(s) and an identification the contaminant's chemical state and physical form.

- Palm Beach State College is responsible for mitigating respiratory hazards to its employees by engineering or administrative controls. When those measures are not feasible or effective, the College is responsible for providing its employees with respirators that are appropriate for their intended use when necessary to protect their safety and health. In addition, the College shall provide appropriate training and medical evaluations to employees at no cost to them.
- The Safety & Risk Manager will be the Program Administrator responsible for establishing and implementing the Respiratory Protection Program.
- District and campus Facilities Managers and supervisors will be responsible for enforcing the program and ensuring compliance with this procedure in their respective departments.
- Employees who use respirators are responsible for their use, care and maintenance in accordance with their instructions and training and for reporting any trouble or malfunction of the respirator to their supervisors.
- Employees whose only use of respirators involves the voluntary use of filtering facepieces (particulate masks) are not included in the Respiratory Protection Program, except for the information provided in Appendix D to Section 1910.134 ("Information for Employees Using Respirators When Not Required Under the Standard"—see Attachment A).
- Employees who wish to use a tight-fitting facepiece respirator where such respirator use is not required are considered voluntary users. This includes most of the employees of Palm Beach State College. The College may provide tight-fitting facepiece respirators at the request of these employees or permit employees to use their own such respirators, if it is determined that such respirator use will not in itself create a hazard. If it is determined that any such voluntary respirator use is permissible, the employee shall be responsible for following the requirements of the Respiratory Protection program, including those for training, medical evaluation and fit-testing, and the College will provide for the medical evaluation and fit-testing of those employees. (NOTE: Although OSHA does not require fit-testing to be conducted for employees who choose to wear a tight-fitting facepiece respirator in a worksite environment where such equipment is not required, the College will nonetheless provide for the medical evaluation and fit-testing of these employees.) The information contained in Appendix D to Section 1910.134 (see Attachment A) shall be provided to voluntary respirator users during the course of such training.

4. HAZARDS REQUIRING A RESPIRATOR

Based on the hazard evaluation that the College has performed, the respiratory hazards to which employees at Palm Beach State College may be exposed at each of its campuses include the following:

- Use of products containing chemicals posing a risk of inhalation hazard during performance of cleaning or maintenance activities in areas that are poorly ventilated.
- Use of products or paints requiring or recommending the use of a respirator as per the product-specific Safety Data Sheet.
- Use of paints having a risk of inhalation hazard, e.g., oil-based paints, in poorly ventilated areas.

- Spraying of paints.
- Spray application of herbicides or pesticides if required by the product label or Safety Data Sheet.
- Conduct of maintenance activities generating copious quantities of dust, e.g., drywall sanding.

The frequency of exposure is dependent upon the frequency of operations involving the exposure scenarios noted above. The contaminant's chemical state and physical form may be determined from specific product's Safety Data Sheet.

5. PROCEDURES

A. Respirator Selection

Air-purifying respirators with tight-fitting facepieces and those with filtering facepieces (particulate masks) will be used exclusively by Palm Beach State College. Respirators are selected and approved for use by the Safety & Risk Manager based upon the physical and chemical properties of the air contaminants and the concentration levels likely to be encountered by the employee. Only NIOSH-approved respirators are allowed for use.

The Facilities Manager at the campus will provide a NIOSH-approved respirator immediately to each employee who is assigned to a job that requires respiratory protection. The Facilities Manager will provide replacement respirators and cartridges as required. Cartridges will be selected on the basis of the contaminants from which the employee requires protection. Attachment B shows the color-coding of the appropriate respirator cartridge for specific contaminants.

Particulate filters, whether as an element on a combination cartridge or when used as a filtering facepiece respirator, have nine classes of selection—three levels of filter efficiency (i.e., 100%, 99% or 95% particulate removal efficiency), each with three categories of resistance to filter efficiency degradation due to the presence of oil aerosols as follows:

- N for *Not* resistant to oil—use only in an environment that is free of oil mists.
- R for *Resistant* to oil—should be worn for only one shift.
- P for oil-*Proof*—may be used for longer than one shift.

If oil aerosols are present, use only R or P series. If no oil aerosols are present, any particulate series (N, R or P) may be used.

B. Cartridge End-of-Service-Life (ESL) Change-Out

At some point during usage of a tight-fitting facepiece respirator, the cartridge will become “used up” and will become less effective in removal of contaminants due to build-up of those contaminants in the cartridge's filter. Temperature, humidity, air flow through the cartridge, the work rate and the presence of other potentially interfering chemicals in the workplace all can have a serious effect on the service life of an air-purifying cartridge or canister. Respirator cartridges shall be replaced prior to the occurrence of any “break-through”.

In the absence of any ESL indicator on the cartridge, the College shall implement a simplified ESL procedure using a schedule for change-out. Because most of the chemical products to which the College's employees are exposed do not require the use of a respirator, based on the Safety Data Sheet for the product, and because most of the employees who use respirators do so on a voluntary basis, the frequency of usage is quite low, perhaps only once per year. Respirators that are infrequently used and used only for a limited amount of time (i.e., less than six times per year and less than one hour at each use) shall change cartridges at the time that the annual Respiratory Protection training and fit-testing are conducted. Cartridges for the respirators used by painters while spray painting shall be changed every three months if spray painting in the Facilities Paint Booth or at least once per year for spray painting elsewhere.

For N-Series or R-Series particulate filters, change the filter after each shift or eight hours, or when it becomes damaged, soiled or difficult to breathe through, whichever occurs first. For P-Series particulate filters, in accordance with 3M Technical Data Bulletin #137, dated December 1997, if the filter is used in environments containing only oil aerosols, change the filter after 40 hours of use or 30 days, whichever occurs first. If the filter is used in environments containing non-oil aerosols, the filter will cake and efficiency will increase. This increase in efficiency is accompanied by an increase in breathing resistance which can help signal the wearer to change the filter. Atmospheres that contain both oil and non-oil aerosols will most likely result in filter caking from the non-oil aerosol. Therefore, the P-series time use limitation reverts to change the filter when it becomes damaged, soiled or difficult to breathe through if the filter is used in environments that contain no oil aerosols, or if the filter is used in environments that contain a mixture of oil and non-oil aerosols.

C. Fit-Testing

Employees using respirators with a tight-fitting facepiece will be properly fitted and tested for a face seal prior to use of the respirator in a contaminated area, and they must pass a fit test. Fit-testing is not required for filtering facepiece respirators. Qualitative fit-testing will be the preferred method of fit-testing. The fit test will be documented using Attachment C.

Fit-testing will not be done on employees with facial hair or jewelry that passes between the respirator seal and the face or interferes with valve function. Such facial hair includes stubble, beards and long sideburns. Wearing of corrective lenses or goggles or other personal protective equipment shall not interfere with the seal of the facepiece to the face of the user.

Fit-testing will be conducted at least annually, or whenever a different respirator facepiece is used (e.g., in response to a report that the fit of the employee's current respirator is unacceptable), or when changes in the employee's physical condition that could affect respirator fit occur. The fit-testing protocol is described in Attachment D.

Records of fit-testing shall be maintained in the Safety & Risk Management Department and retained there for respirator users until the next fit test is administered.

D. Medical Evaluation

Employees included in the Respiratory Protection Program must participate in a medical evaluation in order to determine the employee's ability to use a respirator, before the employee is fit tested or required to use the respirator in the workplace. After the initial medical evaluation, the College will provide additional medical evaluations when:

- An employee reports medical signs or symptoms that are related to ability to use a respirator.
- A PLHCP, supervisor, or the respirator program administrator informs the College that an employee needs to be reevaluated.
- Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation.
- A change occurs in workplace conditions (e.g., physical work effort, protective clothing, temperature) that may result in a substantial increase in the physiological burden placed on an employee.

The Safety & Risk Manager is responsible for retaining the PLHCP. All costs associated with medical evaluations shall be paid by the College.

The medical evaluation will be conducted using the **OSHA Respirator Medical Evaluation Questionnaire (Attachment E)**. The medical questionnaire and any examination(s) required by the PLHCP shall be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee. The medical questionnaire shall be administered in a manner that ensures that the employee understands its content. Supervisors may assist the employee in understanding the questionnaire and in completing the **Request for Medical Clearance for Respirator Use (Attachment F)**; however, in no case shall the supervisor be privy to an employee's confidential medical information. When an employee cannot read or understand the questionnaire, the employee will be sent directly to the PLHCP for medical evaluation.

Employees will be provided with an envelope marked "Confidential" and a security seal which the employee will affix to the envelope after the completed medical evaluation questionnaire and request for medical clearance forms are placed inside. Supervisors will sign the request for medical clearance form prior to the employee placing it in the confidential envelope. Once the envelope is sealed, supervisors or employees will hand-deliver or send the envelope through campus mail to the Safety & Risk Manager (MS#66), who will then deliver or mail the envelope to the PLHCP.

Based on the information provided by the employee in response to the questions in the medical evaluation questionnaire, the PLHCP will determine whether the employee is cleared for respirator use or requires further examination. Follow-up medical exams will be granted to employees as required and/or as deemed necessary by the PLHCP. Follow-up medical examinations may include a physical examination, pulmonary function test, consultation or any other diagnostic procedure deemed necessary by the PLHCP to make a final determination as to the employee's suitability for wearing a respirator.

Upon review of the employee's responses to the medical evaluation questionnaire and/or completion of follow-up medical examinations, the PLHCP will determine whether or not the employee is cleared for respirator use and will so indicate on the employee's Request for Medical Clearance for Respirator Use (Attachment F). Employees will only be allowed to use a respirator upon written approval from the PLHCP. Employees will be provided with an opportunity to discuss the questionnaire and examination results with the PLHCP, if the employee so desires.

All examinations and questionnaires are to remain confidential between the employee and the physician. The Program Administrator will only retain the physician's written recommendations regarding each employee's ability to wear a respirator.

E. Use of Respirators

Respirators shall be used in routine and reasonably foreseeable emergency situations in accordance with the manufacturer's instructions and the training provided. Respirators shall not be worn in atmospheres containing contaminants they were not designed to protect against; e.g. an air-purifying respirator designed to filter particulate matter shall not be used to protect against gases, vapors or very small solid particles of fumes or smoke.

Employees shall not use anyone else's respirator.

Employees shall perform a seal check as per manufacturer's instruction and their training each time they put on the respirator.

Respirators shall not be used with beards or other facial hair, jewelry, corrective lenses or goggles or any other condition that prevents direct contact between the face and the edge of the respirator or that interferes with valve function.

Workers wearing respirators are required to leave the work area under the following conditions:

- Upon malfunction of the respirator.
- Upon detection of leakage of contaminant into the respirator.
- If increased breathing resistance of the respirator is noted.
- If severe discomfort in wearing the respirator is detected.
- Upon illness of the respirator wearer, including: sensation of dizziness, nausea, weakness, breathing difficulty, coughing, sneezing, vomiting, fever or chills.
- To wash face to prevent skin irritation.
- To change cartridges or replace respirators whenever they detect the warning properties of the contaminant or increased breathing resistance.

F. Maintenance

Inspection

1. All respirators shall be inspected before and after each use.
2. Respirator inspection shall include:
 - a. Check of the tightness of connections and the condition of the face piece.
 - b. Check of condition of the headbands.
 - c. Check of condition of the valves.
 - d. Check of condition of the cartridges.
 - e. Check of rubber and elastomeric parts for pliability and deterioration.

Cleaning

1. Respirators shall be cleaned after each use.
2. Cleaning procedures shall include:
 - a. Remove and inspect cartridges.
 - b. Carefully wipe all plastic surfaces with a cleaning pad and a disinfectant.
 - c. Allow respirator to dry approximately 1-2 minutes.
 - d. Inspect all parts; if defective, replace with new parts.
 - e. Place respirator in plastic bag (unsealed) for storage.

Repair

During inspection and cleaning, respirators that do not pass inspection will be removed from service and will be discarded. No repairs of respirators shall be undertaken.

Storage

Respirators will be stored in a location where they are protected from sunlight, dust, heat, cold, moisture and damaging chemicals. They shall be stored in a manner to prevent deformation of the facepiece and exhalation valve.

6. TRAINING AND COMMUNICATION

Employees assigned to jobs requiring respirators will be instructed by their supervisor or the Safety & Risk Manager relative to their responsibilities in the Respiratory Protection Program prior to using the respirator. At that time, they will also be instructed in:

- The need for the respirator and how improper fit, usage or maintenance can compromise the protectiveness of the respirator.
- The limitations and capabilities of the respirator.
- How to use the respirator effectively in emergency situations, including those in which the respirator malfunctions.
- How to inspect, put on and remove, use and check the seals of the respirator.
- Maintenance and storage procedures.
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.

- When to replace the respirator cartridges, e.g., when breathing becomes more labored and difficult.

Retraining in the above topics will be coordinated by the Safety & Risk Manager and will be given at least annually after initial training, or when required due to changes in the workplace or type of respirator that render previous training obsolete, or when suggested by demonstrated inadequacies in the employee's knowledge or use of the respirator or when retraining appears necessary to ensure safe respirator use. Training will be documented using the Palm Beach State College Safety Training Sign-In Sheet. Records of respirator training will be maintained in the Safety & Risk Management Department.

7. PROGRAM EVALUATION

The workplace will be evaluated as necessary by the Safety & Risk Manager to ensure that the provisions of the written Respiratory Protection Program are being effectively implemented and that it continues to be effective. Employees required to use respirators shall be regularly consulted to assess their views on program effectiveness, identify any problems and ensure that they are using the respirators properly. This consultation with employees shall occur during the annual retraining session. Factors to be assessed include, but are not limited to appropriate respirator selection, respirator fit, proper respirator use and proper respirator maintenance.

8. REFERENCES

Title 29, Code of Federal Regulations, Section 1910.134 – Respiratory Protection

ATTACHMENT A

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.

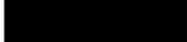
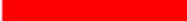
You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the 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 particulate matter 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.

ATTACHMENT B

RESPIRATOR CARTRIDGE SELECTION

There are numerous types of cartridges available for use with the APR respirator. The American National Standards Institute (ANSI) and American Society for Testing and Materials (ASTM) have developed a color-coding system for APR cartridges. The chart below shows the color coding scheme, where the color code strip can be found, and what each color signifies with regard to use.

<i>Respirator Cartridge Color Coding</i>		
Cartridge Color		Cartridge Use
	WHITE	ACID GASES Hydrogen Chloride, Sulfur Dioxide, Hydrogen Sulfide
	WHITE with 1/2" GREEN stripe completely around canister at bottom	Hydrocyanic Acid Vapor
	WHITE with 1/2" yellow stripe completely around canister at bottom	Pure Chlorine
	BLACK	ORGANIC VAPORS (OV)
	YELLOW	ACID GAS with ORGANIC VAPORS Organic Vapors with Hydrogen Chloride, or Sulfur Dioxide, or Hydrogen Sulfide, or Hydrogen Fluoride
	YELLOW with 1/2" blue stripe completely around canister at bottom	Hydrocyanic Acid and Chloroacrin vapor
	GREEN	AMMONIA GAS Ammonia, or Ammonia and Methylamine
	GREEN with 1/2" white stripe completely around canister at bottom	Ammonia and Acid Gases
	CHARTREUSE	FORMALDEHYDE
	MAGENTA	RADIOACTIVE (Except Noble Gases and Tritium) PARTICULATES (Dusts, Fumes, Fogs, Smokes, and in combination with any above gas or vapor)
	BROWN	MULTI-GAS, or MULTI-GAS and OV, or MULTI-GAS and ACID GAS, or ALL
	ORANGE	MERCURY VAPOR (Also used as a 1/2" stripe color to represent gases not included in this table)
	BLUE	CARBON MONOXIDE
	RED with 1/2" gray stripe completely around canister near top	All the above contaminants in one canister

The color code stripe is usually found centered midway between top and bottom of the side. For example, **Acid Gases** have a plain white 1/2" wide stripe. Some cartridges have two stripes. For example, **Pure Chlorine** (gas) has both a 1/2" white stripe and a 1/2" yellow stripe closer to the bottom of the cartridge. Manufacturers of cartridges do try to follow this coding chart. There are literally hundreds of combinations. These colors are in addition to the NIOSH CBRN label that

must also be shown, if cartridge is so certified. The table below provides additional information on respirator cartridge selection for specific contaminants.

Contaminant	Color Coding on Cartridge
Acid gases	White
Hydrocyanic acid gas	White with ½ inch green stripe completely around the cartridge near the bottom.
Chlorine gas	White with ½ inch yellow stripe completely around the cartridge near the bottom.
Organic vapors	Black
Ammonia gas	Green
Acid gases and ammonia gas	Green with ½ inch white stripe completely around the cartridge near the bottom.
Carbon monoxide	Blue
Acid gases and organic vapors	Yellow
Hydrocyanic acid gas and chloropicrin vapor	Yellow with ½ inch blue stripe completely around the cartridge near the bottom
Acid gases, organic vapors, and ammonia gases	Brown
Radioactive materials, except tritium and noble gases	Purple (magenta)
Pesticides	Organic vapor cartridge plus a particulate filter
Any particulates – P100	Purple
Any particulates – P95, P99, R95, R99, R100	Orange
Any particulates free of oil – N95, N99, or N100	Teal

ATTACHMENT C

**PALM BEACH STATE COLLEGE
QUALITATIVE FIT TEST RECORD***

Name: _____ EID#: _____

Department: _____ Supervisor: _____

Respirator Brand: _____ Style: _____

Model: _____ Size: _____

Test Agent: () Bitrex™ () Saccharin () Isoamyl Acetate () Irritant Smoke

Results (circle): Pass Fail

Comments (if any): _____

Name of Test Conductor: _____

Signature: _____

Date: _____

Distribution:

Original – Safety & Risk Management

Copies – Employee, Supervisor

* Fit test records shall be retained for respirator users until the next fit test is administered.

ATTACHMENT D

FIT-TESTING PROTOCOL

Irritant Smoke (Stannic Chloride) Protocol

This qualitative fit test uses a person's response to the irritating chemicals released in the "smoke" produced by a stannic chloride ventilation smoke tube to detect leakage into the respirator.

(a) General Requirements and Precautions

(1) The respirator to be tested shall be equipped with high efficiency particulate air (HEPA) or P100 series filter(s).

(2) Only stannic chloride smoke tubes shall be used for this protocol.

(3) No form of test enclosure or hood for the test subject shall be used.

(4) The smoke can be irritating to the eyes, lungs, and nasal passages. The test conductor shall take precautions to minimize the test subject's exposure to irritant smoke. Sensitivity varies, and certain individuals may respond to a greater degree to irritant smoke. Care shall be taken when performing the sensitivity screening checks that determine whether the test subject can detect irritant smoke to use only the minimum amount of smoke necessary to elicit a response from the test subject.

(5) The fit test shall be performed in an area with adequate ventilation to prevent exposure of the person conducting the fit test or the build-up of irritant smoke in the general atmosphere.

(b) Sensitivity Screening Check

The person to be tested must demonstrate his or her ability to detect a weak concentration of the irritant smoke.

(1) The test operator shall break both ends of a ventilation smoke tube containing stannic chloride, and attach one end of the smoke tube to a low flow air pump set to deliver 200 milliliters per minute, or an aspirator squeeze bulb. The test operator shall cover the other end of the smoke tube with a short piece of tubing to prevent potential injury from the jagged end of the smoke tube.

(2) The test operator shall advise the test subject that the smoke can be irritating to the eyes, lungs, and nasal passages and instruct the subject to keep his/her eyes closed while the test is performed.

(3) The test subject shall be allowed to smell a weak concentration of the irritant smoke before the respirator is donned to become familiar with its irritating properties and to determine if he/she can detect the irritating properties of the smoke. The test operator shall carefully direct a small amount of the irritant smoke in the test subject's direction to determine that he/she can detect it.

(c) Irritant Smoke Fit Test Procedure

(1) The person being fit tested shall don the respirator without assistance, and perform the required user seal check(s).

(2) The test subject shall be instructed to keep his/her eyes closed.

(3) The test operator shall direct the stream of irritant smoke from the smoke tube toward the face seal area of the test subject, using the low flow pump or the squeeze bulb. The test operator shall begin at least 12 inches from the facepiece and move the smoke stream around the whole perimeter of the mask. The operator shall gradually make two more passes around the perimeter of the mask, moving to within six inches of the respirator.

(4) If the person being tested has not had an involuntary response and/or detected the irritant smoke, proceed with the test exercises.

(5) The exercises identified below shall be performed by the test subject while the respirator seal is being continually challenged by the smoke, directed around the perimeter of the respirator at a distance of six inches.

(6) If the person being fit tested reports detecting the irritant smoke at any time, the test is failed. The person being retested must repeat the entire sensitivity check and fit test procedure.

(7) Each test subject passing the irritant smoke test without evidence of a response (involuntary cough, irritation) shall be given a second sensitivity screening check, with the smoke from the same smoke tube used during the fit test, once the respirator has been removed, to determine whether he/she still reacts to the smoke. Failure to evoke a response shall void the fit test.

(8) If a response is produced during this second sensitivity check, then the fit test is passed.

The test subject then engages in the following test exercises:

1. Normal breathing (one minute): In a normal standing position, without talking, breathe normally.
2. Deep breathing (one minute): In a normal standing position, breathe slowly and deeply, taking care not to hyperventilate.
3. Turning head side to side (one minute): Standing in place, turn head from side to side between the extreme positions on each side. Hold head at each extreme position momentarily and inhale.
4. Moving head up and down (one minute): Standing in place, slowly move head up and down. Inhale in the up position (i.e., when looking toward the ceiling).
5. Talking: Talk slowly and loudly enough to be heard. Read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.

6. Bending over (one minute): Bend over at the waist as if to touch the toes (hold on to the hood). Jogging in place may be substituted for this exercise.
7. Normal breathing (one minute): Same as exercise 1 above.

ATTACHMENT E

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

To the employer:

Answers to questions in Section 1, and to question 9 in Section 2 of Part A, do not require a medical examination.

To the employee:

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 your confidentiality, your employer or supervisor must not look at or review your answers, and your employer must tell you how to deliver or send this questionnaire to the health care professional who will review it.

Part A. Section 1. (Mandatory)

The following information must be provided by every employee who has been selected to use any type of respirator (please print).

1. Today's date: _____
2. Your name: _____
3. Your age (to nearest year): _____
4. Sex (circle one): Male/Female
5. Your height: _____ ft. _____ in.
6. Your weight: _____ lbs.
7. Your job title: _____
8. A phone number where you can be reached by the health care professional who reviews this questionnaire (include the Area Code): _____
9. The best time to phone you at this number: _____
10. Has your employer told you how to contact the health care professional who will review this questionnaire (circle one): Yes/No
11. Check the type of respirator you will use (you can check more than one category):
 - a. _____ N, R, or P disposable respirator (filter-mask, non-cartridge type only).
 - b. _____ other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus).
12. Have you worn a respirator (circle one): Yes/No

If "yes," what type(s): _____

Part A. 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").

1. Do you currently smoke tobacco, or have you smoked tobacco in the last month: Yes/No
2. Have you ever had any of the following conditions?
 - a. Seizures: 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 slight hill or incline: Yes/No
 - c. Shortness of breath when walking with other people at an ordinary pace on level ground: 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): 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 problem 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
- d. 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: Yes/No

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 rashes: 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 the health care professional who will review this questionnaire about your answers to this questionnaire: Yes/No

Questions 10 to 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, 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 ear drum: 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. Difficulty fully moving your head up or 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

Part B (at discretion of the health care professional)

Any of the following questions, and other questions not listed, may be added to the questionnaire at the discretion of the health care professional who will review the questionnaire.

1. In your present job, are you working at high altitudes (over 5,000 feet) or in a place that has lower than normal amounts of oxygen: Yes/No

If "yes," do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you're working under these conditions: Yes/No

2. At work or at home, have you ever been exposed to hazardous solvents, hazardous airborne chemicals (e.g., gases, fumes, or dust), or have you come into skin contact with hazardous chemicals: Yes/No

If "yes," name the chemicals if you know them: _____

3. Have you ever worked with any of the materials, or under any of the conditions, listed below:

- a. Asbestos: Yes/No
- b. Silica (e.g., in sandblasting): Yes/No
- c. Tungsten/cobalt (e.g., grinding or welding this material): Yes/No
- d. Beryllium: Yes/No
- e. Aluminum: Yes/No
- f. Coal (for example, mining): Yes/No
- g. Iron: Yes/No
- h. Tin: Yes/No
- i. Dusty environments: Yes/No
- j. Any other hazardous exposures: Yes/No

If "yes," describe these exposures: _____

4. List any second jobs or side businesses you have: _____

5. List your previous occupations: _____

6. List your current and previous hobbies: _____

7. Have you been in the military services? Yes/No

If "yes," were you exposed to biological or chemical agents (either in training or combat): Yes/No

8. Have you ever worked on a HAZMAT team? Yes/No

9. Other than medications for breathing and lung problems, heart trouble, blood pressure, and seizures mentioned earlier in this questionnaire, are you taking any other medications for any reason (including over-the-counter medications): Yes/No

If "yes," name the medications if you know them: _____

10. Will you be using any of the following items with your respirator(s)?

- a. HEPA Filters: Yes/No
- b. Canisters (for example, gas masks): Yes/No
- c. Cartridges: Yes/No

11. How often are you expected to use the respirator(s) (circle "yes" or "no" for all answers that apply to you)?:

- a. Escape only (no rescue): Yes/No
- b. Emergency rescue only: Yes/No
- c. Less than 5 hours per week: Yes/No
- d. Less than 2 hours per day: Yes/No
- e. 2 to 4 hours per day: Yes/No
- f. Over 4 hours per day: Yes/No

12. During the period you are using the respirator(s), is your work effort:

a. Light (less than 200 kcal per hour): Yes/No

If "yes," how long does this period last during the average shift: _____ hrs. _____ mins.

Examples of a light work effort are sitting while writing, typing, drafting, or performing light assembly work; or standing while operating a drill press (1-3 lbs.) or controlling machines.

b. Moderate (200 to 350 kcal per hour): Yes/No

If "yes," how long does this period last during the average shift: _____ hrs. _____ mins.

Examples of moderate work effort are sitting while nailing or filing; driving a truck or bus in urban traffic; standing while drilling, nailing, performing assembly work, or transferring a moderate load (about 35 lbs.) at trunk level; walking on a level surface about 2 mph or down a 5-degree grade about 3 mph; or pushing a wheelbarrow with a heavy load (about 100 lbs.) on a level surface.

c. Heavy (above 350 kcal per hour): Yes/No

If "yes," how long does this period last during the average shift: _____ hrs. _____ mins.

Examples of heavy work are lifting a heavy load (about 50 lbs.) from the floor to your waist or shoulder; working on a loading dock; shoveling; standing while bricklaying or chipping castings; walking up an 8-degree grade about 2 mph; climbing stairs with a heavy load (about 50 lbs.).

13. Will you be wearing protective clothing and/or equipment (other than the respirator) when you're using your respirator: Yes/No

If "yes," describe this protective clothing and/or equipment: _____

14. Will you be working under hot conditions (temperature exceeding 77 deg. F): Yes/No

15. Will you be working under humid conditions: Yes/No

16. Describe the work you'll be doing while you're using your respirator(s):

17. Describe any special or hazardous conditions you might encounter when you're using your respirator(s) (for example, confined spaces, life-threatening gases):

18. Provide the following information, if you know it, for each toxic substance that you'll be exposed to when you're using your respirator(s):

Name of the first toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of the second toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of the third toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

The name of any other toxic substances that you'll be exposed to while using your respirator:

19. Describe any special responsibilities you'll have while using your respirator(s) that may affect the safety and well-being of others (for example, rescue, security):

**ATTACHMENT F
PALM BEACH STATE COLLEGE
REQUEST FOR MEDICAL CLEARANCE FOR RESPIRATOR USE**

Name: _____ EID#: _____ Date of Birth: _____

Position (Title): _____ Supervisor: _____

Department: _____ Campus: _____

Work Phone: _____

Check Type(s) of Respirator(s) to be used:

N, R, or P disposable respirator (filter-mask, non-cartridge type only)

Half-mask air purifying respirator (non-powered) Full-facepiece air purifying respirator (non-powered)

Other respirator, specify type: _____

Check Level of Work Effort While Wearing Respirator:

Light Medium Heavy

Check Extent of Respirator Use:

Daily Occasionally, but more than once a week Rarely or for emergency use only

Typical Length of Respirator Use in Hours/Minutes: _____ / _____

Special work considerations (i.e., high places, temperature, humidity, hazardous materials, protective clothing, etc.):

Supervisor's Signature

Date

Physician's / Licensed Healthcare Professional's Statement

Follow-up medical examination(s) required:

Medical Exam Chest X-Ray Pulmonary Function Test

Other, specify: _____

Follow-up medical examination(s) are not required, the employee may:

Use respirator(s) without restrictions

Use respirator(s) with restrictions (see below)

Not use respirator(s)

Restrictions:

Signature of Physician / Other Licensed Healthcare Professional

Date

Return completed form to Palm Beach State College, Safety & Risk Management