



RESPIRATORY PROTECTION PROGRAM

1. PURPOSE

This policy will establish requirements for Okaloosa County employees and visiting contractors in the selection, use, and maintenance of respiratory protective equipment as determined necessary to reduce employee exposure to toxic chemical agents, occupational diseases, atmospheric contamination and allow employees to work safely in hazardous work environments.

2. DEFINITIONS

- 2.1. **Air-Purifying Respirator** means a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.
- 2.2. **Atmosphere-Supplying Respirator** means a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.
- 2.3. **Demand Respirator** means an atmosphere-supplying respirator that admits breathing air to the facepiece only when a negative pressure is created inside the facepiece by inhalation.
- 2.4. **Emergency Situation** means any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment that may or does result in an uncontrolled significant release of an airborne contaminant.
- 2.5. **End-Of-Service-Life Indicator (ESLI)** means a system that warns the respirator user of the approach of the end of adequate respiratory protection, for example, that the sorbent is approaching saturation or is no longer effective.
- 2.6. **Filtering Facepiece** (dust mask) means a negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium.
- 2.7. **Fit Factor** means a quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

- 2.8. **Fit Test** means the use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual. (See also Qualitative fit test QLFT and Quantitative fit test QNFT.)
- 2.9. **Hazardous Area** means any department, laboratory, work area where toxic materials are used, and through a spill, mechanical malfunction, process upset, or explosion could release concentrations of vapors, dust, or fumes that could be harmful to health.
- 2.10. **High Efficiency Particulate Air (HEPA) Filter** means 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.
- 2.11. **Immediately Dangerous To Life And Health (IDLH)** means an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.
- 2.12. **Loose-Fitting Facepiece (Respirator)** means a respiratory inlet covering that is designed to form a partial seal with the face (i.e., dust mask).
- 2.13. **Oxygen Deficient Atmosphere** means an atmosphere with oxygen content below 19.5% by volume.
- 2.14. **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 paragraph (e) of this section.
- 2.15. **Qualitative Fit Test (QLFT)** means a pass/fail fit test to assess the adequacy of respirator fit that relies on the individual's response to the test agent.
- 2.16. **Quantitative Fit Test (QNFT)** means an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.
- 2.17. **Self-Contained Breathing Apparatus (SCBA)** means an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.
- 2.18. **Supplied-Air Respirator (Airline Respirator, SAR)** means an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.
- 2.19. **Tight-Fitting Facepiece (Respirator)** means a respiratory inlet covering that forms a complete seal with the face.
- 2.20. **User Seal Check** means an action conducted by the respirator user to determine if the respirator is properly seated to the face.

3. RESPONSIBILITIES

- 3.1. Each director is responsible for identifying the hazardous areas of their operations and ensuring that the provisions of this policy are carried out.
- 3.2. Employees will use the respiratory protective equipment provided in accordance with instructions provided in training and under the conditions outlined in this policy.
- 3.3. The Risk Management Director will develop and revise the necessary training program and assist the affected sections in the initial employee training. The Risk Management Director will also monitor the overall compliance with the provisions of this policy.
- 3.4. A list of qualified employees in the use of respirators and/or SCBA's will be maintained in each director's office.

4. POLICY

- 4.1. Employees expected to use respiratory protective equipment, on either a routine or emergency basis, will be trained in its use at initial hire, with refresher training provided on an annual basis. Likewise, prior to be assigned tasks requiring the use of respiratory equipment, supervisors will schedule employees for a medical evaluation by the Safety and Health Office for physical fitness in the use of respirators.
- 4.2. Respiratory protective equipment should not be stored within a hazardous area. It should be placed at stations outside of hazard area for emergency use where it is quickly accessible at all times. It should be stored in water-proof/dust-proof compartments and clearly marked.
- 4.3. Respiratory protective equipment and associated equipment must provide adequate respiratory protection against the particular hazard to be expected as approved by the Risk Management Director.
- 4.4. Employees will not be assigned to tasks requiring the use of respiratory equipment unless it has been determined that they are physically able to perform the work while using the equipment. (Physical evaluations will be scheduled and funded by the employee's department).
- 4.5. Persons using respiratory equipment cannot wear corrective lenses with frames unless an approved fitting has been provided for the respiratory equipment.
- 4.6. Persons using respiratory equipment should not have extra facial hair. Facial hair can affect the seal rendering the respiratory equipment ineffective.

NOTE

Due to the potential of improper seal, beards and/or bushy sideburns should not be worn by any employee required to be qualified in respirators or SCBA's.

- 4.7. Okaloosa County will provide respirators, training, and medical evaluations for respirator usage at no cost to the employee.

5. **PROCEDURES FOR SELECTING RESPIRATORS**

- 5.1. Supervisors shall review the work areas under their direction for all respiratory hazards their employees may encounter.
- 5.2. The supervisor will match the type of respirator to the actual or potential hazard present. For those hazardous areas where Immediately Dangerous to Life and Health (IDLH) atmospheres are not present, the supervisor may wish to choose the negative pressure respirators. The employee is only authorized the use of atmosphere-supplying respirators (SCBA & SAR) in those areas with an IDLH atmosphere.

NOTE

Where the respiratory hazard cannot be identified or the employee's exposure cannot be reasonably estimated, the atmosphere shall be considered to be IDLH.

- 5.3. The director is responsible in making the brand, type, and size of respirator available to the employee. For cost reasons, the purchase of one brand and type of respirator is acceptable provided that brand and type can correctly fit all employees within that workplace. Those employees who cannot properly pass the fit test and check seal the chosen brand masks, are entitled to have other respirator brands made available at no cost to the employee.

NOTE

All respirators used by County employees must be NIOSH approved. If the supervisor or employee has any doubt as to the certification, contact the supplier or the Risk Management Director before use.

- 5.4. Once the respirator size, style, model and make has been properly fitted to the employee, that employee may not wear any other respirator having a different size, model or make without again being properly evaluated and fitted to that new additional respirator.
- 5.5. The director will maintain files on employees and the respirator mask(s) they are qualified to wear. Those files will be kept in the director's office.

6. TYPES OF RESPIRATORS

- 6.1. **Filtering facepiece (also includes dust mask):** can be used to protect against nuisance dusts and mists that are free of oil. Filtering facepieces rated as high efficiency particulate air filters (HEPA) must be used to protect against TB exposures.
- 6.2. **Negative pressure respirator (half facepiece/full facepiece masks w/filter canisters):** used to protect against specific fumes, vapors, and chemicals.

NOTE

Items 6.1 and 6.2 above can only be used in non-IDLH atmospheres containing *at least 19.5% and no more than 23.5% oxygen!* Filtering and negative pressure masks are not to be used in IDLH atmospheres.

NOTE

Negative pressure respirators can only be used against specific hazards. Employees must read the labels marked and/or match the color on the respirator filter canister to determine applicability to protect against a hazard.

- 6.3. **Self-Contained Breathing Apparatus (SCBA):** to be used when work is to be performed in an IDLH atmosphere. The SCBA must have a 30 minute or greater air bottle supply to comply with this program.
- 6.4. **Supplied-Air Respirators (SAR):** is to be used in an IDLH atmosphere, when the employee must have freedom of movement and dexterity or, when the wearing of an SCBA may cause an ignition hazard.

7. TYPES OF FILTERS

- 7.1. Filter elements have now been classified into nine classes of filters (three levels of filter efficiency, with three categories of resistance to filter efficiency degradation). The following may assist the employee in determining the proper class filter.
 - Filter Efficiency: 95%, 99%, and 99.97%
 - Filter Efficiency Degradation:
 - N-** Not resistant to oil
 - R-** Resistant to oil
 - P-** Oil proof
- 7.2. Extreme care should be exercised in the selection of the proper canisters for respirators. In addition to the color-coding, labels should be affixed to the canister by the manufacturer that specifies the type of protection afforded. The Risk Management Director may be contacted to assist in the selection the proper

canister for the job. To assist the employee, a copy of the color table has been placed at the end of this program.

8. PROCEDURES FOR PROPER USE

- 8.2. Respiratory equipment used on a routine basis will be cleaned and disinfected after each use. Respirator equipment maintained for emergency use will be cleaned and disinfected after each use or as often as conditions may warrant. Employees will be instructed in cleaning procedures during the training program.
- 8.3. Under no circumstances are negative-pressure respirators or gas masks to be used in fire fighting operations or in dense smoke.
- 8.4. Before using a respirator, it should be inspected for the tightness of fittings and connections, conduction of face piece, headband, valves, connecting tube, and canister.
- 8.5. When using abrasive blasting agents, a continuous flow air line respirator constructed so it will cover the wearer's head, neck and shoulders to protect him/her from rebounding abrasive will be worn.
- 8.6. Whenever a County employee using an SCBA or SAR respirator is in atmospheres immediately dangerous to life or health (IDLH), one or more standby persons with an SCBA will be positioned at the nearest location where fresh air is available for emergency rescue. Employees must use the "buddy system" and have visual, voice, or walkie-talkies. **No one will enter a hazardous environment alone.**
- 8.7. Breathing air for SCBA's and SAR's will be of high purity. Compressed and liquid oxygen shall meet the US Pharmacopoeia requirements medical or breathing air and compressed breathing air shall meet at least the requirements of Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specifications for Air, G-7.1-1989 to include:
 - 8.7.1. Oxygen content (v/v) of 19.5-23.5%;
 - 8.7.2. Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;
 - 8.7.3. Carbon monoxide (CO) content of 10 ppm or less;
 - 8.7.4. Carbon dioxide content of 1,000 ppm or less; and
 - 8.7.5. Lack of noticeable odor.

NOTE

A fire department having the support equipment available to do so, or a qualified distributor/supplier capable of meeting the requirements set forth in #8.7 above, will be the only entities allowed to refill SCBA or SAR bottles/air supplies.

- 8.8. Cylinders used to supply breathing air to respirators meet the following requirements:
 - 8.8.1. Cylinders are tested and maintained as prescribed in the Shipping Container Specification Regulations of the DOT 49 CFR part 173 and part 178;
 - 8.8.2. Cylinders purchased breathing air have a certificate of analysis from the supplier that the breathing air meets the requirements for Grade D breathing air; and
 - 8.8.3. The moisture content in the cylinder does not exceed a dew point of -50 deg.F (-45.6 deg.C) at 1 atmosphere.

9. MEDICAL CRITERIA FOR USE OF RESPIRATORS

- 9.2. County employees will be medically evaluated prior to wearing any respirator. As part of the County's health and wellness program, employees whose positions require the use of a respirator will have an initial evaluation in the hiring process. Additional medical evaluations will occur during the following:
 - 9.2.1. an employee reports medical signs or symptoms that are related to ability to use a respirator;
 - 9.2.2. a PLHCP, supervisor, or the Risk Management Director determines that an employee needs to be reevaluated;
 - 9.2.3. information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation; or
 - 9.2.4. 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 the employee.
- 9.3. Employees will be given a written medical questionnaire at each evaluation. A follow-up medical examination will be provided for an employee who gives a positive response to any question among questions 1 through 8 in Section 2 of Part A of Okaloosa County Respirator Medical Evaluation Questionnaire or, whose initial medical examination demonstrates the need for a follow-up medical examination.
- 9.4. In addition to the medical evaluation, the following information must be provided to the PLHCP before the PLHCP can make a recommendation concerning the employee's ability to use a respirator:
 - 9.4.1. the type and weight of the respirator to be used;
 - 9.4.2. the duration and frequency of respirator use;
 - 9.4.3. the expected physical work effort;

9.4.4. additional protective clothing and equipment to be worn; and,

9.4.5. temperature and humidity extremes that may be encountered.

9.5. A copy of the County's medical questionnaire has been placed at the end of this policy titled, "*Appendix C Okaloosa County Respirator Medical Evaluation Questionnaire (Mandatory).*"

10. **FIT TESTING**

10.1. Fit testing will be performed for all employees prior to wearing any respirator. Employees must be fit tested to the same make, model, style, and size of respirator that will be used.

10.2. The preferred method Countywide will be the qualitative test method. Employees using SCBA and/or SAR equipment are also to use the Qualitative fit test and accomplish this by temporarily converting the SCBA facepiece to a negative pressure respirator.

10.3. Fit tests must be performed **annually** and when changes occur in the employee's physical condition that could affect respirator fit. Such conditions include, but not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body.

NOTE

Employees must be fit tested to *each* respirator of size, style, model and make they may wear within their work place. It is permissible to be qualified and fit tested to multiple respirators.

10.4. A copy of the fit testing procedures as prescribed by Federal OSHA has been placed at the end of this policy titled, "Appendix A to 29 CFR 1910:134; *ADDITIONAL GUIDELINES AND INFORMATION, Fit Testing Procedures (Mandatory).*"

11. **MAINTENANCE, STORAGE, INSPECTION AND DISPOSAL OF RESPIRATORS**

11.1. Only a qualified person will repair respirators and SCBA's. A qualified person is an employee who has been trained by the manufacturer, the distributor (vendor) trained by the manufacturer, or the manufacturer itself. Respiratory equipment is not to be tampered with or modified in any form from the original manufacturer's specifications and design.

11.2. Each county department utilizing respiratory equipment will select a representative to monitor and track all repairs of SCBA and SAR systems within their department. The cost of replacement and/or repair will come from the owning organization. All SCBA and SAR equipment will be properly marked for maintenance tracking prior to being put into use.

- 11.3. Respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and they shall be packed or stored to prevent deformation of the facepiece and exhalation valve.
- 11.4. Damaged respirators will be immediately taken out of service and repaired, if possible. If not possible, the respirator will be labeled and destroyed. Dust masks can be placed in a trash receptacle or biohazard bag, if applicable. Rubberized face fitting respirators in addition to the above requirement must be cut up or mangled so as not to provide a proper seal. SCBA tanks will be labeled and taken out of service.
- 11.5. Filtering elements failing a visual inspection or expired past the service life will be immediately taken out of service and destroyed.
- 11.6. Respirators and SCBA's maintained for emergency use will be inspected on a **monthly** basis. A record of these inspections, along with an inspection checklist, will be kept inside the respirator storage area or SCBA carrying case. (if appl.) These checklists can be obtained from the distributor.
- 11.7. Respirators frequently used on a day-to-day basis will be inspected **prior to use** as well as on a monthly basis.
- 11.8. Respirators will be inspected as required in accordance with Appendix B-2 *Cleaning Procedures (Mandatory)*, located at the end of this policy. Directors may develop their own specific inspection checklist provided it meets or exceeds criteria in Appendix B-2.

12. TRAINING FOR RESPIRATOR USE

- 12.1. For all training involving respirator use by County employees, the training will include instruction on:
 - Why the respirator is necessary;
 - How improper fit, usage, or maintenance can compromise the protective effect of the respirator;
 - Limitations and capabilities of the respirator;
 - Proper use in emergency situations and during malfunctions;
 - Inspection, installation, removal, and proper seal checks;
 - Proper maintenance and storage;
 - Recognition of medical signs and symptoms that may limit or prevent the effective use of respirators; and
 - General requirements of this program.

12.2. **Retraining** will be administered annually and when the following situations occur:

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

12.3. All training will be documented and kept in a place as determined by the Director.

13. **VOLUNTARY USE OF RESPIRATORY EQUIPMENT (not required by this policy)**

13.1. Employees wishing to use respiratory equipment where hazards exist at lower levels below permissible exposure limits are encouraged to do so, but must adhere to the following requirements. Employees must:

13.2. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.

13.3. Choose respirators certified by NIOSH for use to protect against the contaminant of concern.

13.4. Not wear respirators into atmospheres containing contaminants for which their respirator is not designed to protect against.

13.5. Keep track of individual respirator and do not mistakenly use someone else's respirator.

13.6. Employees using *tight fitting* respiratory equipment not mandated by this standard procedure *must be medically able* to use that respirator. Therefore, even with voluntary use, employees must be scheduled for and satisfactorily pass a medical review prior to use of any tight fitting respiratory equipment.

NOTE

Those employees whose only use of respirators involve the voluntary use of filtering facepieces (dust masks), within an atmosphere having exposure limits set below OSHA standards, are not required to be included in this written respiratory program. This includes fit test or medical evaluation.

13.7. Employees must ensure that the respirator is cleaned, stored, and maintained so that its use does not present a health hazard to the user.

14. **PROGRAM EVALUATION**

This program will be reviewed on an annual basis for overall effectiveness. Directors and supervisors will review this program with their employees and determine if changes are needed. Items to review are: changes in hazards found in the workplace, changes in procedures which require respirator protection, changes in procedures which affect employee exposure or stress, and changes in operations which affect emergency procedures.