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SPARTANBURG COUNTY RESPIRATORY PROTECTION PROGRAM

I. Introduction

In the control of occupational diseases caused by breathing air contaminated with dusts, fogs, fumes, mists, gases, smokes, sprays or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used.

II. Purpose and scope

The practices and procedures described here constitute the respiratory protection program under which respirators are effectively utilized at Spartanburg County Government.

III. Responsibility

A. _____ (Name & Title) is the respirator program administrator.

He/she is responsible for:

1. Administering the overall program.
2. Implementing training and instruction programs.
3. Ensuring that medical evaluation procedures are implemented.
4. Selection and provision of appropriate respirators.

B. Supervisors are responsible for ensuring that the respiratory protection procedure is implemented in their particular areas. Duties of supervisors include:

1. Ensuring that employees under their supervision have received appropriate training, fit testing, and annual medical evaluations.
2. Ensuring the availability of appropriate respirators and accessories.
3. Ensuring awareness of tasks requiring the use of respiratory protection.
4. Enforcing the proper use of respiratory protection when necessary.
5. Ensuring that respirators are properly cleaned, maintained and stored according to the respiratory protection plan.
6. Ensuring that respirators fit well and do not cause discomfort.

7. Monitoring work areas and operations to identify respiratory hazards.
- C. Each employee has the responsibility to wear his or her respirator when and where required and in the manner in which they were trained and:
1. Care for and maintain their respirator as instructed, and store them in a clean sanitary location.
 2. Inform the supervisor if the respirator no longer fits well, and request a new one.
 3. Inform the supervisor or program administrator of any respiratory hazards that they feel are not adequately addressed in the work place and of any other concerns that they have regarding the program.

IV. Respirator Selection

_____ (program administrator) will select respirators to be used on site, based upon the hazards to which workers are exposed. He will conduct a hazard evaluation for each operation, process, or work area that will include:

1. Identification and development of a list of hazardous substances used in the workplace, by department, or work process.
2. Review of work processes to determine where potential exposures to these hazardous substances may occur.
3. Exposure monitoring to quantify potential hazardous exposures. End of Service Life Indicators will be used. If there is no ESLI appropriate for conditions in the employer's workplace, the employer implements a change schedule for canisters and cartridges that is based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life. The employer shall describe in the respirator program the information and data relied upon and the basis for the canister and cartridge change schedule and the basis for reliance on the data.

Department	Contaminants	Exposure Level (8-hr TWA)	PEL	Controls

V. Medical Evaluations

1. _____ (program administrator) is responsible for seeing that medical evaluations are conducted to determine that employees who are required to or those who are allowed to voluntarily wear respirators are medically able to do so.

2. _____ (name of licensed health care professional) of _____ (name of clinic or hospital) will provide the medical evaluations.
3. Medical evaluations will be conducted using Appendix C of the standard. _____ (program administrator) will give a copy to all employees requiring medical evaluations to complete and _____ (how to send or take to doctor or clinic/hospital).
4. Follow-up medical exams will be granted as found necessary by the _____ (doctor or clinic/hospital).
5. All employees will be granted an opportunity to speak with _____ (doctor/licensed health care professional) about their medical evaluation, if they request to do so.
6. _____(program administrator) will provide _____(name of doctor or clinic/hospital) with a copy of this program, a copy of the OSHA respirator standard, a list of hazardous substances in the workplace, the employee’s job title, proposed respirator type and weight, length of time required to wear respirator, expected physical work load, potential temperature and humidity extremes and protective clothing required.
7. After an employee has received clearance and begun to wear a respirator, additional medical evaluations will be provided when:
 - a. the employee reports signs/symptoms related to their ability to use a respirator, such as shortness of breath, dizziness, chest pains, or wheezing.
 - b. _____ (doctor or clinic/hospital) or supervisor informs the program administrator that the employee needs to be re- evaluated.
 - c. information from this program, including observations made during fit tests and program evaluation indicates a need for re-evaluation.
 - d. a change occurs in workplace conditions that may impose an additional physiological burden on the employee.

PERSONNEL INCLUDED IN MEDICAL SURVEILLANCE PROGRAM

Name	Department	Work Procedure Job Description	Type Respirator

VI. Fit Tests

1. _____ (program administrator) is responsible for conducting fit tests for all employees required to wear tight fitting respirators.
2. Fit tests must be conducted:
 - a. before employees are allowed to wear any tight-fitting facepiece respirator.
 - b. when there are changes in the employee’s physical condition that could affect respiratory fit.
 - c. at least annually thereafter.

- d. using the make, model, and size of respirator they will actually use.
- e. using OSHA approved fit test protocols found in Appendix B of the OSHA standard. The methods in use at this facility are _____ (qualitative) and _____ (quantitative).

VII. Respirator Use

- 1. Employees must use their respirators in accordance with the training they receive.
- 2. Employees shall conduct user seal checks each time they wear their respirator, using either the positive or negative pressure check specified in Appendix B-1 of the respiratory protection standard.
- 3. Employees must be permitted to leave the work area to clean their respirator, change filters or cartridges, replace parts, or to inspect their respirator if necessary.
- 4. Employees must not be permitted to wear tight-fitting respirators if they have any condition such as facial scars, facial hair, or missing dentures that prevents them from achieving a good seal.

Name	Department	Work Procedure Job Description	Type Respirator

5. Emergency use procedures

The following work areas or departments have been identified as having foreseeable emergencies. Respirators may be for responding to emergencies or for escape only.

Department Work Area	Foreseeable Emergency	Type Respirator	Respirator Location

6. IDLH (immediately dangerous to life and health) procedures:

- a. One or more trained and equipped standby person stays outside the IDLH atmosphere.
- b. Visual, voice or signal line communication is maintained with the employee in the IDLH atmosphere.
- c. The employer is notified before the standby person enters the IDLH atmosphere to provide emergency rescue.
- d. The employer must provide assistance appropriate to the situation.

- e. Employees engaged in interior structural fire fighting use SCBAs.
- f. Only Grade D breathing air must be used in cylinders for supplied air respirators _____ (program administrator) has identified these areas as having the potential for IDLH conditions:

Work Area	IDLH Condition	Respirator Required	Respirator Location

VIII. Cleaning, Maintenance, Change Schedules and Storage

- a. Respirators are to be cleaned and disinfected at the cleaning station located at _____.
- b. Respirators issued for exclusive use of one employee must be cleaned and disinfected as often as necessary to be kept clean.
- c. Respirators issued to more than one person must be cleaned and disinfected before being worn by different individuals.
- d. Respirators maintained for emergency use must be cleaned and disinfected after each use.
- e. Respirators used in fit testing and training must be cleaned and disinfected after each use.
- f. Procedures for cleaning respirators.
 - i. Remove filters, cartridges, or canisters. Disassemble facepieces by removing diaphragms, valve assemblies, hoses or other components recommended by the manufacturer, removing and discarding or repairing defective parts.
 - ii. Wash components in warm (43 C, 110 F) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff-bristled brush may be used to remove dirt.
 - iii. Rinse components in warm running water, then drain.
 - iv. When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for 2 minutes in either a solution made by adding 1 milliliter of laundry bleach to one liter of water, an aqueous solution of iodine made by adding approximately 0.8 milliliters of tincture of iodine/100 cc of 45 % alcohol to 1 liter of warm water, or another cleanser of equivalent disinfectant quality when used as recommended or approved by the manufacturer.
 - v. Components should be hand-dried with a clean lint-free cloth or air dried.
 - vi. Reassemble facepiece, replacing filters, cartridges and canisters where necessary.
 - vii. Test the respirator to ensure that all components work properly.
- g. Respirators must be stored in a clean, dry place, so as not to deform the facepiece.
 - i. Respirators for general use will be stored in _____ (location or locations).
 - ii. Emergency use respirators will be stored in cabinets marked as emergency respirators at _____(locations).

- h. Maintenance of respirators.
 - i. Respirators for routine use must be inspected before each use during cleaning.
 - ii. Emergency use respirators must be inspected at least monthly and as recommended by the manufacturer.
 - iii. Emergency escape-only respirators must be inspected before being placed in service.
 - iv. Respirator inspections must include at least the following:
 - 1. A check of respirator function, tightness of connections, and the condition of the facepiece, head straps, valves, connecting tubes, and cartridges, canisters or filters.
 - 2. A check of elastomeric parts for pliability and signs of deterioration.
 - 3. SCBA's must be inspected monthly. Air and Oxygen cylinders must be kept in fully charged state and be recharged when the pressure falls to below 90 %. Regulator and warning devices must be checked for proper working condition.
 - 4. For emergency use respirators, a certificate documenting the date, signature of inspector, the required remedial action and serial number of the respirator must be maintained.
- i. Repairs
 - 1. Repairs are to be made only by _____ (name of trained employee or vendor) and only parts from the respirator manufacturer that are NIOSH approved shall be used.
 - 2. Repairs must be made according to the manufacturer's recommendations.
 - 3. Reducing and admission valves, regulators, and alarms must not be repaired except by the manufacturer or a technician trained by the manufacturer.
- j. Change Schedule
 - 1. Change schedules should be determined by the program administrator based on exposure levels and time of exposure or the use of an ESLI (attach supporting documentation for change schedule).

IX. Breathing Air Quality and Use

- a. Compressed and liquid oxygen must meet United States Pharmacopoeia requirements for medical or breathing oxygen.
- b. Compressed breathing air must meet at least the requirements for grade D breathing air, oxygen content 19.5-23.5%, Hydrocarbon content of 5 mg/m³, Carbon Monoxide content of 10 ppm or less, and lack of noticeable odor.
- c. Compressed oxygen must not be used in atmosphere-supplying respirators that have previously used compressed air.
- d. Oxygen concentrations greater than 23.5% must not be used in equipment unless it was designed for oxygen service or distribution.
- e. Cylinders used to supply breathing air to respirators must be tested and maintained according to Department of Transportation regulations in 49 CFR parts 173 and 178, and be accompanied by a certificate from the supplier that the breathing air meets the requirements for Grade D breathing air, and that the

moisture content in the cylinder does not exceed a dew point of –50 degrees F at 1 atmosphere pressure.

- f. Compressors used to supply breathing air must be constructed and situated so as to prevent entry of contaminated air, minimize moisture content so that the dew point at 1 atmosphere pressure is 10 degrees F below the ambient temperature.
- g. Compressors must have in-line air-purifying sorbent beds and filters to further ensure breathing air quality, they must be maintained and replaced periodically following the manufacturer's instructions, and tagged with the most recent change date and signature of person changing them.
- h. Oil-lubricated compressors must have a high temperature or carbon monoxide alarm, or both, to monitor carbon monoxide levels. If only high temperature alarm is used, the air supply must be monitored before use, then twice weekly, to keep carbon monoxide levels below 10 ppm.
- i. Non-oil lubricated compressors must not produce carbon monoxide levels greater than 10%.
- j. Breathing air couplings must be incompatible with outlets for non-respirable worksite air or other gas systems. No asphyxiating substances are to be allowed into the breathing air lines.

X. Training and Information

Effective respirator training must be provided for employees required to wear respirators. The training must be comprehensive, understandable, and must be provided before requiring an employee to use a respirator and at least annually thereafter.

- 1. Employees who are allowed to voluntarily wear dust masks must be provided the basic information on respirators in Appendix D.
- 2. Employees must be able to demonstrate at least:
 - a. why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protection of the respirator;
 - b. what the limitations and capabilities of the respirator are;
 - c. how to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions.
 - d. how to inspect, put on and remove, use, and check the seal;
 - e. what the procedures are for maintenance and storage of the respirator;
 - f. how to recognize medical signs and symptoms that may limit or prevent the effective use of the respirator.
 - g. the general requirements of the OSHA respirator standard.
- 3. Retraining must be given when:
 - a. changes in the workplace or the type of respirator used occur;
 - b. it becomes obvious by employees' knowledge or use of the respirator that the employee has not retained the necessary understanding or skill.
 - c. other situations arise in which retraining appears necessary.

XI. Program Evaluation

- a. _____ (program administrator) is responsible for ensuring that the written respiratory protection program is being followed and for consulting employees to see if they are using the respirators properly.

- b. _____ (program administrator) is responsible for assessing the effectiveness of the respiratory protection program by:
 - i. consulting employees required to use respirators to identify any problems and corrective measures necessary.
 - ii. determining if appropriate respirator selection is made for the hazards to which the employee is exposed.
 - iii. determining if respirator fit allows the use of the respirator without interfering with effective workplace performance.
 - iv. determining if respirators are being maintained properly.

XII. Recordkeeping

- a. A written copy of this program and the OSHA standard is kept in _____ (location on site).
- b. _____ (program administrator) keeps copies of medical evaluations.
- c. _____ (program administrator) has copies of fit test results that show the employees' names, type of fit test performed, specific make, model, style, and size of respirator tested, date of test, the pass/fail results for qualitative fit tests or the fit factor and strip chart recording or other recording of the fit test results for quantitative fit tests.