Chapter 19 : RESPIRATORY PROTECTION

INTRODUCTION/OVERVIEW

The OSHA General Industry Standard for respiratory protection, 29 CFR 1910.134 and 1926.103 as amended effective 4-8-98, requires employers to establish a Respiratory Protection Program. This program's primary objective is to prevent excessive exposure to occupational dusts, fumes, mists, radionuclides, gases and vapors through the use of engineering controls and/or personal respiratory equipment. This chapter presents a summary outline of the essential components of our respiratory protection program.

GENERAL PROGRAM REQUIREMENTS

MANAGEMENT

1. Determine what specific applications require the use of respiratory equipment.
2. Provide proper respiratory equipment to meet the needs of each specific application using the guidelines set forth by the American Industrial Hygiene Association or another similar body.
3. Maintain an adequate stock of respiratory equipment at the jobsite.
4. Provide adequate training and instructions on the use of all respiratory protection equipment.
5. Provide adequate training on the proper maintenance, cleaning, and storage of all respiratory equipment.
6. Establish procedures in case of an emergency.
7. Ensure that all protective equipment is regularly inspected and tested and that defective equipment is immediately removed from service.
8. Ensure that no respiratory equipment is fit tested or issued to an employee without receiving prior approval from **CUNNINGHAM PAVING**'s consulting physician.
9. Ensure that all respiratory equipment is worn **only** by the specific individual for which it has been fit tested.

EMPLOYEES

1. Wear the respiratory equipment issued in accordance with the manufacturer's specifications.

2. Immediately report to the supervisor any malfunction of the equipment.

3. Never use another employee's equipment.

SPECIFIC PROGRAM REQUIREMENTS

EVALUATION OF THE ATMOSPHERE

Management is responsible for determining the nature and degree of actual or potential exposure. The following guidelines can be used when identifying those specific applications requiring the use of respiratory equipment.

Oxygen - Deficient Atmospheres

Any atmosphere that tests perceptibly lower than the normal 19.5% of oxygen is considered to be oxygen deficient.

Use only self-contained breathing apparatus or airline respirator supplied from cylinders.

Immediately Hazardous Atmospheres

Atmospheres where gases are present in concentrations that would rapidly endanger a person are considered to be immediately hazardous atmospheres. These atmospheres are **not oxygen deficient**.

Use only self-contained breathing apparatus, supplied air masks, or cartridge masks.

Not Immediately Hazardous Atmospheres

Atmospheres containing gaseous contaminants or particulate matter are considered to be not immediately hazardous.

Use chemical cartridge respirators for gaseous contaminants.

Use mechanical filter respirators to protect against particulate matter.

SELECTION OF EQUIPMENT - GUIDELINES

Mechanical Filter Respirators

Use for protection against airborne particulate matter including dusts, mists, metal fumes and smoke.

Do not use to protect against gases, vapors, or oxygen deficiency.

Chemical Cartridge Respirators

Use to protect against light concentrations of certain acid gases and organic vapors. Protection is afforded by utilizing various chemical agents to purify inhaled air.

Do not use in atmospheres that are oxygen deficient.

Do not use 1/2 mask to protect against gaseous material that is extremely toxic in small concentrations (hydrogen cyanide, hydrogen sulfide).

Do not use 1/2 mask to protect against exposure to harmful gaseous material that cannot be detected by odor (carbon monoxide).

Do not use 1/2 mask to protect against gaseous material in concentrations that are highly irritating to the eyes (ammonia, chlorine).

Air Supplied Hood

Use to protect against nuisance levels of material.

Use when airflow is needed for cooling purposes.

Do not use in any situation where the user would be endangered by loss of air pressure.

Airline Respirator

An airline respirator consists of a full-face mask supplied with breathing air by either a compressor or multiple stationary cylinders.

Use in any atmosphere. Provides protection regardless of the degree of contamination or oxygen deficiency.

Precautions

1. Attach a rope to user's harness whenever used in an atmosphere immediately dangerous to life.

2. Require standby person or persons to be present, with suitable rescue equipment near at hand, whenever used in an atmosphere immediately dangerous to life.

3. Guard against damage to the hose and regulator while in use.

4. Carefully store to avoid damage.

Cylinder Type Self-Contained Breathing Apparatus (SCBA)

Use in any atmosphere. Provides protection regardless of the degree of contamination or oxygen deficiency because it utilizes compressed breathing air.

Precautions

1. Require standby person or persons to be present, with suitable rescue equipment near at hand, whenever used in an atmosphere immediately dangerous to life.