UNIVERSITY of ARKANSAS
1871

RESPIRATORY PROTECTION PROGRAM

OFFICE of ENVIRONMENTAL HEALTH & SAFETY

Campus Location: Physical Plant
521 S. Razorback Road

Telephone: 479 575 5448

Web site: http://www.phpl.uark.edu

RESPIRATORY PROTECTION

Established by University of Arkansas for the protection of employees from possible respiratory hazards in the workplace

Applies to all UofA employees who are required to wear respiratory protection during their work activities or for emergencies

FEDERAL & STATE REGULATIONS FOR RESPIRATORY PROTECTION

Code of Federal Regulations (CFR)
40 CFR Part 170 Worker Protections Standard (WPS) for Agricultural Workers

Occupation Safety and Health Administration (OSHA)
Standards 29 CFR 1910.134

Arkansas Department of Labor
Basic Safety Manual
Rules 55 - 61

It is a violation of Federal and State law to use any material in a manner inconsistent with its labeling.

If you are required to wear a respirator

Your will be required to:

Have a medical evaluation

Attend respirator use training

Pass a respirator fit test

All provided at no cost to you

VOLUNTARY RESPIRATOR USE

If an employee choose to wear a respirator during work activities that do not require respiratory protection:

The work activity will be evaluated, by the Department or supervisor, to determine if the use of respiratory protection jeopardizes the health or safety of the employee

If approval is granted the employee will be subject to all UofA Respiratory Protection Program provisions

RESPIRATORY HAZARDS

- Inhalation of:

Particulates	Vapors
Sprays	Mists
Fogs	Smoke
Gases	Dusts

- Entry into confined spaces

- Working in a toxic or oxygen deficient environment

TYPES OF RESPIRATORS

AIR PURIFYING

SUPPLIED AIR

FILTER MASK

AIR PURIFYING RESPIRATORS (APR)

- Half Face

- Full Face

AIR PURIFYING RESPIRATORS

- Can only be used in environments that have sufficient oxygen to breathe

- Air is filtered through a cartridge that is attached to the respirator

  - Provides protection only against the type of contaminants listed on the cartridge

SUPPLIED AIR RESPIRATORS (SAR)

Air Supplied

Air Line

Self Contained

Breathing Apparatus (SCBA)

AIR SUPPLIED RESPIRATORS

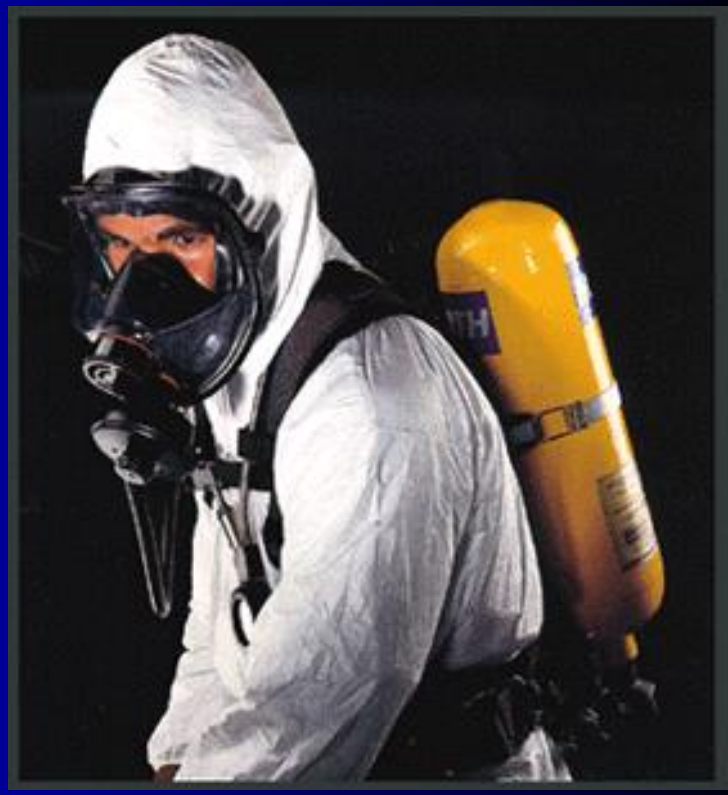
- Can be used in toxic environments

- Air is supplied through an attached air line from an outside source such as an air compressor

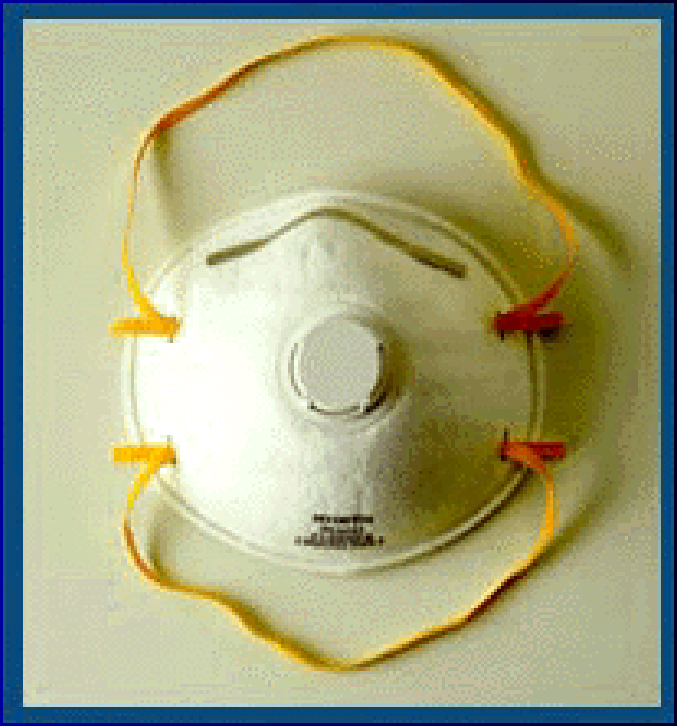
SELF CONTAINED BREATHING APPARATUS (SCBA)

- **Can be used in toxic and air deficient atmospheres**

- **Air is supplied from a compressed air cylinder that is carried by the user**



Filter Masks



FILTER MASKS

- Provide limited protection from dusts and mists
- DO NOT provide protection in toxic or low oxygen environments
- May not filter out very fine particulates

RESPIRATOR SELECTION

The Occupation Safety & Health Administration has set standards for worker respiratory protection

All respirator filter cartridges must have the National Institute of Occupational Safety and Health (NIOSH) certification

Respirator and cartridge selection will be based on the hazard(s) the user will be exposed to during respirator use

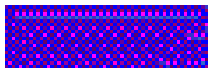
FILTER CARTRIDGES

Filter cartridges are color coded to identify the chemical hazard(s) for which they provide protection from

RESPIRATOR CARTRIDGE COLOR CODE


Dust/Mist

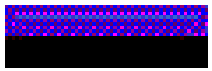

Dust/Mist/Fume

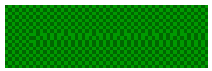

Radionuclide/Dust/Mist/Fume/ Asbestos

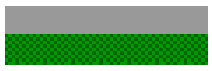

Organic Vapor


Organic Vapor/Dust/Mist/ Paint Mist/Pesticide

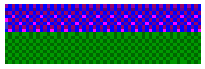

Organic Vapor/Dust/Mist/ Fume/Paint Mist/Pesticide

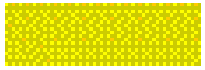

Organic Vapor/Dust/Mist/ Fume/ Radionuclide/Asbestos


Ammonia/Methylamine


Ammonia/Methylamine/Dust/Mist

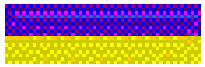

Ammonia/Methylamine/Dust/ Mist/Fume


Ammonia/Methylamine/Dust/Mist/ Fume/Radionuclide/Asbestos


Organic Vapor/Acid Gas


Organic Vapor/Acid Gas/Dust/Mist

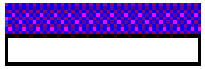

Organic Vapor/Acid gas/Dust/ Mist/Fume


Organic Vapor/Acid Gas/Dust/Mist/ Fume/ Radionuclide/Asbestos


Acid Gas/Formaldehyde


Acid Gas/Formaldehyde/Dust/ Mist


Acid Gas/Formaldehyde/Dust/ Mist/Fume


Acid Gas/Formaldehyde/Dust/Mist/ Fume/Radionuclide/Asbestos

Color codes on cartridges & filters are only a guide. Read the label to be sure you have the right kind. If a combination of elements is required check to ensure you have the right combination on each side of the respirator.

RESPIRATOR USE TRAINING

A Respirator Use Training session consists of:

- **Respirator Use Video**
- **Discussion/review**
- **Quiz and quiz review**

Time of the training session is approximately 1 hour

MEDICAL EVALUATION & FIT TESTING

Medical Evaluation

OSHA Regulation require that a medical evaluation be conducted to determine the respirator user's capability to perform their anticipated work tasks while wearing respiratory protection

Fit Testing

OSHA Regulations require that Fit Testing be conducted to ensure that the respirator properly fits the individual using the respirator

Medical evaluations and fit testing are required annually for respirator users

RESPIRATOR FIT TEST

Fit testing determines if the respirator mask seals properly and fits the respirator user

Types of fit testing

Quantitative

Qualitative

Self Fit Test

Positive Pressure Check

Negative Pressure Check

QUANTITATIVE FIT TEST

A Quantitative Fit Test accurately measures leakage around the face mask of half and full face air purifying respirators

The leakage is measured using a fit testing machine that is connected to the respirator

The most accurate means of measuring respirator fit and leakage

QUALITATIVE FIT TEST

While wearing the respirator, the person is exposed to an odor agent. If the respirator mask seal leaks, the wearer will report any odor leaking into the mask.

Odor agents used for testing are

Irritant Smoke – Stannic chloride

Banana Oil – Isoamyl acetate

Bitrex – Bitrex

Saccharin – Sodium saccharin

SELF FIT TEST

Before every use and periodically during use: respirators should be fit tested using a "Self Fit Test" to test for proper sealing

<u>The Self Fit Test consists of</u>

- Positive Pressure Check
- Negative Pressure Check

RESPIRATOR LIMITATIONS

Do not use for protection against air contaminates other than those listed on the cartridge

Do not use a respirator when conditions prevent a good face piece seal

Respirators do not provide protection to exposed areas of the body

Working in a toxic or oxygen deficient environment

RESPIRATOR REVIEW INFORMATION

When must a respirator be used:

If a label states a respirator must be worn when using the chemical or material

If the work environment contains dusts, vapors, mists, fumes, etc. that pose a health hazard

If the work environment lacks breathable air

BEFORE EACH USE

CHECK YOUR APR RESPIRATOR

Check the cartridges to ensure they are approved for the hazard you will be exposed to

Visually inspect the respirator to ensure there are no missing or broken parts

Check to ensure the respirator is clean

Perform a Self Fit Test

TYPES OF RESPIRATORS

AIR PURIFYING RESPIRATORS (APR)

Full Face

Half Face

Filter Masks

SUPPLIED AIR RESPIRATORS (SAR)

Air Supplied Air Line

Self Contained Breathing Apparatus (SCBA)

APR RESPIRATOR LIMITATIONS

Respirators do not provide protection to exposed areas of the body

Cannot be used in air deficient atmospheres

Provides protection only against the type of contaminants listed on the cartridge

Must be Fit Tested to ensure there is no leakage around the mask

FOR MORE INFORMATION ON RESPIRATORS AND RESPIRATORY PROTECTION

ASK YOUR SUPERVISOR

TELEPHONE EH&S 575 5448

ON LINE: EH&S web site: http://www.phpl.uark.edu

EH&S SERVICES

SAFETY TRAINING

Hazcom
Radiation Safety
Blood Borne Pathogens
Confined Space Entry
Chemical Hygiene
Fall Protection
Lock Out – Tag Out
Laboratory Safety
Fire Safety & Extinguisher Use
Lock Out – Tag Out
Respiratory Protection & PPE

SERVICES

Hazardous Waste Disposal
Bio Waste & Sharps Disposal
Laboratory Inspection
Spill Clean Up
Air Quality Sampling
Accident Investigation

For information on these and other safety training programs or services call EH&S.

Telephone: 575 5448