

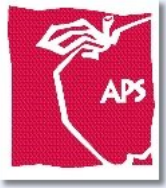
ALBUQUERQUE PUBLIC SCHOOLS



RESPIRATORY PROTECTION PROGRAM

Risk Management Department

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ALBUQUERQUE PUBLIC SCHOOLS
RISK MANAGEMENT DEPARTMENT

**RESPIRATORY PROTECTION
PROGRAM**

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ALBUQUERQUE PUBLIC SCHOOLS

RESPIRATORY PROTECTION PROGRAM

I. PURPOSE

To aid in protecting employees and students and to comply applicable State and Federal laws and standards, the Albuquerque Public Schools has developed this **Respiratory Protection Program**. This program serves as the district's written processes and procedures to provide employees protection from airborne contaminants and to coordinate the selection, use and maintenance of respiratory protective equipment. Such equipment is used to reduce employee exposure to air contaminants which may be injurious to health. Medical monitoring is essential in providing both initial physical assessment and periodically to ensure adequate protection requirements are being utilized.

This program is intended to meet the requirements of the OSHA standard for Respiratory Protection, Title 29 Code of Federal Regulations (CFR) Part 1910.134.

II. SCOPE

The Respiratory Protection Program applies to those employees who have been assigned tasks requiring respiratory protection.

This program shall be available to contractors' personnel and to regulatory agencies when requested. This program is designed to be evaluated and updated annually. The Risk Management Department is responsible for conducting the evaluation and update.

III. DEFINITIONS

AIR CONTAMINANTS(S) - Any item which is not one of the normal constituents of pure atmospheric air or that is present in a dissimilar quantity. Air contaminants may be divided into two broad groups, based upon physical characteristics: (1) gases/vapors and (2) particulates.

AIR-LINE RESPIRATOR - (also referred to as air-supplied or supplied air respirator) is a type of respirator that provides a supply of breathable air from a clean source outside of the contaminated work area.

AIR PURIFYING RESPIRATOR - A type of respirator that uses filters or sorbents to remove harmful substances from the air. Filters remove particulates such as dusts, mists and fumes, while chemical cartridges and canisters have a sorbent material that removes gases and vapors.

APPROVED RESPIRATOR - A respiratory device that has passed a series of laboratory performance tests specified in 30 CFR 11. The actual testing and certification of respirators is done by the National Institute of Occupational Safety & Health.

CANISTER - A type of absorption unit used with an air-purifying respirator for removal of moderate concentrations of specific vapors and gases. Canisters contain a larger quantity of sorbent material than chemical cartridges.

CHEMICAL CARTRIDGE - A type of absorption unit used with an air-purifying respirator for removal of low concentrations of specific vapors and gases. They contain a smaller quantity of sorbent material than canisters.

ENGINEERING CONTROLS - Methods of controlling employee exposures by modifying the source or reducing the quantity of contaminants released into the workroom environment.

FIT CHECK - A quick assay method used to determine if a tight-fitting respirator fits adequately on the wearer=s face so it can function properly. It uses a positive pressure test and/or a negative pressure test.

FIT TEST - An assay method used to check the wearer=s ability to maintain a good facepiece-to-face fit with a particular respirator. It uses either a qualitative or quantitative fit test method.

GAS MASK - Another name used interchangeably for an air-purifying respirator that uses a canister.

HIGH EFFICIENCY PARTICULATE AEROSOL (HEPA) - A type of particulate air filter that is at least 99.97% efficient when challenged with 0.3 m dioctyl phthalate particles.

IMMEDIATELY DANGEROUS TO LIFE OR HEALTH (IDLH) - Conditions that pose an immediate threat to life or health. Also, conditions that pose an immediate threat of severe exposure to contaminants such as radioactive materials which are likely to have adverse cumulative or delayed effects on health.

NEGATIVE PRESSURE RESPIRATOR - A respirator that relies on inhalation through air-purifying elements to deliver breathable air to the user. During inhalation, air evacuated from the facepiece creates a negative pressure with respect to the atmosphere outside the respirator.

ODOR THRESHOLD - The lowest concentration of an air contaminant that can be detected by smell.

OXYGEN DEFICIENCY - Atmosphere conditions where less than 19.5% oxygen is present. An atmosphere with less than 16.5% oxygen is considered immediately dangerous to life or health.

PARTICULATE FILTER - A type of filtering device used with an air-purifying respirator for removal of airborne particulate matter (aerosols): dust, mist, fume and smoke.

PERMISSIBLE EXPOSURE LIMIT (PEL) - An exposure limit that is published and enforced by OSHA as a legal standard.

POSITIVE PRESSURE RESPIRATOR - A respirator in which normally a positive pressure is maintained inside the hood or facepiece; may be an air-purifying or an air-supplying respirator.

POWERED AIR-PURIFYING RESPIRATOR (PAPR) - A type of air-purifying respirator that uses a power source (usually a battery pack) to operate a blower that passes air across the air-cleansing element to supply purified air to the facepiece.

PROTECTION FACTOR - The maximum level of respiratory protection provided by a properly functioning respirator. It is the ratio of the ambient airborne concentration of the contaminant to the concentration inside the facepiece.

QUALITATIVE FIT TEST - A fit test that relies on the respirator wearer's ability to sense a test agent by taste, smell or irritation. Agents used are saccharin, isoamyl acetate or stannic oxychloride smoke.

QUANTITATIVE FIT TEST - A fit test for which a respirator is worn in a test atmosphere generated inside a booth. Instrumentation measures any contaminant leakage into the respirator. Results are expressed as fit factors.

RESPIRATOR - A device which protects the wearer from inhalation of harmful air contaminants.

SELF-CONTAINED BREATHING APPARATUS (SCBA) - A respiratory device that provides complete protection against toxic vapors/gases and oxygen deficient atmospheres. The wearer is independent of the surrounding atmosphere because he/she is breathing with a system that is portable and admits no outside air.

TIME-WEIGHTED AVERAGE (TWA) - The 8-hour average airborne concentration that shall not be exceeded in any 8-hour work shift of a 40-hour work week. Also see permissible exposure limit.

IV. RESPONSIBILITIES

A. M&O Administrator

The M&O Administrator has the responsibility to ensure that this Respiratory Protection Program is enforced in operations where an exposure to air contaminants or the potential for oxygen deficiency may cause adverse health effects. Operations involving such situations will be identified by the Supervisor and evaluated by EHRD.

B. Supervisors

The Supervisor (of employees required to use respiratory protection during designated job activities) shall be responsible for execution of this Respiratory Protection Program, including:

1. Compiling a list of tasks which include possible exposure to air contaminants or the potential for oxygen deficiency. This will

include any new procedures/operations introduced at the workaday. The Supervisor shall submit this list to EHRD for evaluation.

2. Ensuring that employees have respirator training, fit testing and medical evaluation prior to initial respirator usage;
3. Requiring that employees complete a medical evaluation from the district's Designated Healthcare Provider who evaluates the employee's physical fitness with respect to respirator use (respiratory clearance). This will include a periodic medical surveillance of the employee's health status to make certain that no adverse health effects to possible air contaminant exposure is occurring;
4. Keeping accurate records.
5. Conducting routine inspections of respiratory protective equipment to ensure proper maintenance, cleaning and storage;
7. Conducting training with employees on the policies and procedures outlined in this Respiratory Protection Program;
8. Requesting periodical medical re-evaluation when required; and
9. Posting designated work areas as mandatory respirator wear areas.

C. Environmental Hazard Response Department (EHRD)

EHRD will be responsible for:

1. Assessing tasks the Supervisor has identified as producing a possible exposure to air contaminants or the potential for oxygen deficiency. Such assessment will include air sampling to determine employee exposure levels and/or work area air contaminant levels;
2. Selecting and approving the appropriate respirator for a specific task that meets the protection factors required
3. Conducting initial respirator training and fit testing for employees;
5. Reviewing and maintaining a copy of the employee's Final Rating Respirator Clearance Status;
6. Maintaining data on work area surveillance and employee exposure monitoring;

D. Risk Management

Risk Management is responsible for:

1. Coordinating employee medical evaluation and surveillance with the Supervisor and the district's Designated Healthcare Provider;
2. Establishing and reviewing this Program. This will include technical support in initial Program execution and annual reviews to maintain Program effectiveness and employee compliance.

E. Designated Healthcare Provider - Physician or Advanced Registered Nurse Practitioner (ARNP)

1. A designated Physician or ARNP shall be responsible for medically evaluating the status of each employee with respect to respirator

wear. Respiratory evaluations and pulmonary function tests are performed in accordance with the National Institute of Occupational Safety & Health (NIOSH) guidelines.

2. The medical evaluation will be on file with the Designated Healthcare Provider, who will give a final rating report of the employee's respiratory clearance status to the employee. The employee will present this report to his/her Supervisor, who will maintain the report in the employee's file and send a copy to EHRD.
3. The frequency of medical monitoring will depend on the worker's age, respirator type working conditions and specific OSHA requirement. The frequency of medical monitoring will be coordinated between the Healthcare Provider and Risk Management, and upon written request of the department Supervisor.

F. Employees

Employees, who have been assigned tasks requiring respiratory protection, are expected to comply with the policies and procedures outlined in this Respiratory Protection Program, including:

1. Participation in respirator training, fit testing and medical evaluation prior to initial respirator use. Additionally, annual retraining is required;
2. Wearing his/her respirator under conditions designated by the Supervisor;
3. Inspecting his/her respirator; and
4. Conducting proper respirator care.

V. TRAINING

- A. Each employee, whose job duties require the use of respiratory protective equipment, will be initially trained by EHRD concerning his/her responsibilities in the respirator program. Each employee will also be instructed in the need, use, limitations and care of their individually assigned respirator.
- B. The Supervisor will conduct retraining once a year or when a process requiring respiratory protection is added or changed. All training sessions will be documented on each employee's training record, therefore, an attendance roster must be maintained for each training session.

VI. WORK AREA SURVEILLANCE AND EXPOSURE MONITORING

- A. Work area surveillance and employee exposure monitoring are required by 29 CFR 1910.134(b)(8) in all areas where airborne contaminants may be generated. This includes work processes or operations that generate air contaminated with harmful levels of dusts, fogs, fumes, mists, gases, smokes, sprays or vapors. The surveillance shall include:

1. Identification of the presence and concentration of airborne contaminants;
 2. Identification of physical, chemical and toxicologic properties; and
 3. Identification of other factors such as odor thresholds, eye irritation potential and the probability of oxygen deficiency and Immediately Dangerous to Life and Health (IDLH) atmospheres.
 4. Determination of the work areas to be evaluated will be the responsibility of the Supervisors with EHRD. Determination is based on specific tasks performed by workers or specific conditions that exist in a work area.
- B. The initial area surveillance and employee exposure monitoring will be conducted by EHRD Office. Initial exposure monitoring must accomplish the following:
1. Identify any substances that may cause adverse health effects.
 2. Determine any feasible engineering controls to reduce exposure or eliminate the need for respiratory protective equipment.
 3. Estimate the 8-hour time-weighted average exposure and its range under normal operating conditions for each appropriate job category.
 4. Estimate any peak exposures.
 5. Identify the type of respirator required for each job category and/or operation, including requirements of other protective equipment as well.
 6. Establish the frequency of periodic monitoring based on type of contaminant encountered and regulations governing respiratory protective equipment in particular exposure settings.
 7. Initial exposure monitoring results should lead to a series of decisions that will demonstrate that respiratory protective equipment is the only control technique that can adequately control workers' exposures. It is a means of eliminating all other control techniques, as well as determining the proper type of respiratory protective equipment for the particular exposure situation.
- C. The frequency of monitoring depends on the type of airborne contaminant encountered and on the specific regulations (OSHA) applicable to the use of respiratory protective equipment in particular exposure settings. Supervisors should alert EHRD of any change in procedures/operations implemented at the worksite. At a minimum, work area surveillance and employee exposure monitoring should occur at least annually in identified areas.
- D. Records indicating exposure levels for work areas that require respiratory protection will be maintained by EHRD.

VII. RESPIRATOR SELECTION

- A. Proper selection of respirators shall be made in accordance with the American National Standards Institute, ANSI Z88.2-1992, *Practices for Respiratory Protection* and National Institute for Occupational Safety & Health, Pub. No. 87-116, *Guide to Industrial Respiratory Protection*.
- B. All respirators shall be selected and approved by EHRD. For proper respirator selection, the following basic steps should be taken:
 - 1. The potential for oxygen deficiency, whether during routine conditions or under emergency constraints or other unusual conditions, must be determined and considered. Oxygen monitoring equipment may be needed.
 - 2. If air contaminants are the *only* concern, the possible contaminants present must be identified. Considerations should include variability in work process, raw materials used, by-products, final products, wastes and maintenance/repair operations involved. Material Safety Data Sheets (MSDS) are a good source of information.
 - 3. Identification of other factors such as odor thresholds, eye irritation potential and the probability of oxygen deficiency and Immediately Dangerous to Life and Health (IDLH) atmospheres.
 - 4. The range of expected air contaminant concentrations for areas in which respirators may be needed must be determined. Determine exposure levels for all affected workers. Considerations should include worker time-weighted and peak exposures, work cycle variability, seasonal variability and worker variability.
 - 5. The recommended exposure limit for each contaminant present should be listed.
 - 6. IDLH concentrations for air contaminants present must be listed.
 - 7. The potential for IDLH concentrations being reached during emergency conditions, as well as routine conditions, must be considered.
 - 8. The lower explosive limit should be listed for flammable substances. Gas or vapor concentrations exceeding the lower explosive limit are IDLH situations as well. Consideration should be given to spills and emergency conditions.
 - 9. Health effects or symptoms that may result from overexposure to the air contaminants should be defined. For example, eye irritation potential may dictate the use of a full face-piece respirator rather than a half-face. Skin irritation potential may dictate protective clothing should be worn to prevent excessive skin contact.
 - 10. Separate consideration should be given to using a respirator during routine conditions versus emergency, rescue or non-routine conditions. Routine use of a respirator denotes daily or regular use. Non-routine use of a respirator denotes infrequent or occasional use.

VIII. SELF-CONTAINED BREATHING APPARATUS (SCBA) for EMERGENCY USE

- A. A Self-Contained Breathing Apparatus (SCBA) may be required in specific areas for emergency use. The determination of which areas that will require this is based upon EHRD's initial area surveillance with the Supervisor(s). SCBA equipment will be used only by qualified personnel. It is used in oxygen-deficient environments and in situations where high or unknown concentrations of toxic gases, vapors or particulates are present. SCBA units that always maintain a positive pressure inside the mask, provide the highest protection in atmospheres that are IDLH.

- B. Mandatory guidelines:
 - 1. Personnel qualified to use SCBA equipment must be fully trained to understand the operation, limitations, proper care and capabilities of the unit.
 - 2. When SCBA equipment is used, it will be tested in an uncontaminated atmosphere, if possible, prior to entering the hazardous area.
 - 3. An employee will not work with SCBA in a hazardous atmosphere alone. At least one additional employee suitably equipped with a similar breathing apparatus must be in contact with the first employee and must be available to render assistance if necessary.
 - 4. SCBA equipment will be inspected monthly by trained personnel. Inspection and maintenance information will be recorded in an equipment file.