



**LEUCADIA**  
WASTEWATER  
**DISTRICT**

LEADERS IN  
ENVIRONMENTAL  
PROTECTION

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# RESPIRATORY PROTECTION PROGRAM

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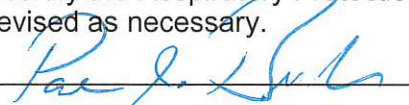
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- A Program Review and Certification Log
- B Voluntary Use of Respirators
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I certify the Respiratory Protection Program for the Leucadia Wastewater District has been reviewed and revised as necessary.

  
Paul J. Bushee, General Manager

12/12/2023  
Date Certified

**1. PROGRAM REVIEW AND CERTIFICATION**

The Respiratory Protection Program (RPP) at the Leucadia Wastewater District (LWD) will be reviewed and revised as necessary to ensure the program is current. All revisions are documented on the Program Review and Certification Log (Attachment A).

**2. PURPOSE**

The purpose of the RPP is to prevent or minimize employees' occupational exposure against harmful dusts, fumes, mists, gases, and vapors as required by California Code of Regulations, Title 8 (8 CCR), Section 5144. The primary objective is to prevent excessive exposure to these contaminants. The RPP establishes requirements for the approval, selection, use and storage of respirators, medical approval, and periodic selection and use of respiratory protection based on the hazards and conditions of LWD operations.

**3. SCOPE**

The RPP's scope includes and identifies the use and selection of respirators, respiratory medical evaluations by LWD's health clinic, fit testing, respirator maintenance, training requirements, facial and hair regimen.

**4. APPLICABILITY**

This RPP applies to any employee who performs or assists with specific operations, functions, or processes for which respiratory protection equipment is or may be required.

**5. RESPONSIBILITIES**

5.1. Department Directors or Superintendent are responsible for:

- Determining what specific tasks or activities require use of respiratory equipment,
- Ensuring the necessary respiratory equipment is available to employees to meet the needs

- of each specific application.
  - Ensuring all affected employees attend annual respiratory protection training.
  - Ensuring new and current employees obtain annual medical clearance before wearing a respirator.
  - Ensuring employees are knowledgeable of the respiratory protection requirements for the areas in which they work.
  - Implementing identified engineering and/or administrative controls to eliminate or reduce respiratory hazards.
- 5.2. Field Services Supervisors are responsible for:
- Understanding the requirements of this program and ensuring that the employees under their supervision understand and comply with all of its requirements.
  - Evaluating the environment conditions in work areas and identifying the introduction of toxic substances.
  - Verifying there is no feasible alternative to respirators before their use.
  - Monitoring the potential for increase in exposure and other conditions, which could increase employee exposure.
  - Conduct regular workplace evaluations for respiratory hazards to determine if the correct respirators are being used and worn properly.
  - Evaluating the need for and recommending engineering controls to eliminate or reduce respiratory hazards.
- 5.3. Administrative Service Supervisor is responsible for:
- Scheduling and coordinating the FST's annual respiratory medical evaluations with LWD's medical provider.
  - Ensuring that new FST employees receive a respiratory medical evaluation during their pre-employment evaluation.
- 5.4. Employees are responsible for:
- Attending scheduled respiratory protection training prior to the use of respirator.
  - Completing an annual respirator medical questionnaire and submitting it to LWD's medical provider.
  - Wearing the appropriate respiratory protection equipment according to proper instructions.
  - Maintaining the equipment in a clean and operable condition.
  - Notifying their supervisor or a manager immediately when their work environment or tasks involve unusual respiratory hazards.

## 6. DEFINITIONS

**AIR-SUPPLY DEVICE:** A blower, a compressor, compressed air bottles/cylinders or other source of grade D air for the air-line respirator.

**ASSIGNED PROTECTION FACTOR (APF):** The minimum anticipated protection provided by a properly functioning respirator or class of respirators to a given percentage of properly fitted and trained users.

**BREAKTHROUGH:** When the capacity of an air purifying cartridge or canister is exceeded, and contaminants are no longer removed from the breathed air (see Service Life).

**BREATHING TUBE:** A tube through which air flows to the face piece, mouthpiece, helmet, hood or suit.

**CANISTER (AIR-PURIFYING):** A container with a filter, sorbent, catalyst or any combination thereof, which removes specific contaminants from the air drawn through it.

**CARTRIDGE:** A container filled with a medium, which purifies the air by removing specific

chemical contaminants by filtering, absorption, reaction, or a combination of these.

**DEMAND FLOW RESPIRATOR:** An atmosphere-supplying respirator, which delivers airflow only when negative pressure is created inside the face piece by inhalation.

**EMERGENCY SITUATION:** 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 potentially harmful release of an airborne contaminant.

**EMPLOYEE EXPOSURE:** Exposure to a concentration of an airborne contaminant that would occur, if the employee were not using respiratory protection.

**END-OF-SERVICE-LIFE INDICATOR (ESLI):** A system that warns the respirator user of the approach of the end of adequate respiratory protection; example, that the sorbent is approaching saturation and is no longer effective.

**ESCAPE ONLY RESPIRATOR:** Respiratory protection devices that are designed for use only during escape from hazardous atmospheres.

**FACEPIECE:** That portion of a respirator that covers the wearer's nose and mouth in a quarter-mask (above the chin) or half-mask (under the chin) face piece, or that covers the nose, mouth, and eyes in a full-face piece respirator.

**FIT FACTOR:** 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.

**FIT TEST:** Use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

**FULL FACE AND HALF FACEMASKS WITH CARTRIDGES:** These devices contain cartridges that remove gases and vapors. They may be single-use (disposable) or replaceable cartridges.

**FUME:** A solid condensation particulate, usually of a vaporized metal.

**GAS:** An aeriform fluid that is in a gaseous state at standard temperature and pressure.

**HAZARDOUS ATMOSPHERE:** Any atmosphere that is oxygen deficient or which contains a toxic or disease-producing contaminant exceeding the legally established limit.

**HIGH-EFFICIENCY PARTICULATE AIR FILTER (HEPA):** A filter that is at least 99.97% efficient in removing mono-dispersive particulates of 0.3 micrometers in diameter. The equivalent NIOSH 42 CFR 84 particulate filters are the N100, R100, and P100 filters.

**IMMEDIATELY DANGEROUS TO LIFE OR HEALTH (IDLH):** Exposure to airborne contaminants that is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment.

**LOOSE-FITTING FACE PIECE:** A respiratory inlet covering that is designed to form a partial seal with the face.

**MIST:** A liquid condensation particulate

**NEGATIVE PRESSURE RESPIRATOR (TIGHT FITTING):** A respirator in which the air pressure inside the face piece is negative during inhalation with respect to the ambient air pressure outside the respirator.

**OXYGEN DEFICIENT ATMOSPHERE:** An atmosphere with oxygen content below 19.5% by volume.

**PHYSICIAN OR OTHER LICENSED HEALTH CARE PROFESSIONAL (PLHCP):** Individual whose legally permitted scope of practice allows them to independently provide, or be delegated the responsibility to provide, some or all of the health care services required by T8 CCR 5144(e).

**POSITIVE PRESSURE RESPIRATOR:** A respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

**POWERED AIR PURIFYING RESPIRATOR (PAPR):** An air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

**PRESSURE DEMAND RESPIRATOR:** A positive pressure atmosphere-supplying respirator that admits breathing air to the face piece when the positive pressure is reduced inside the face piece by inhalation.

**QUALITATIVE FIT TESTING (QLFT):** A pass/fail fit test to assess the adequacy of respirator fit that relies on the individual's sensory response to the test agent.

**QUANTITATIVE FIT TESTING (QNFT):** An assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

**RECOMMENDED EXPOSURE LIMIT (REL):** An 8 or 10-hour time-weighted average (TWA) or ceiling (C) exposure concentration recommended by NIOSH that is based on an evaluation of the health effects data.

**RESPIRATOR:** A device designed to protect the wearer from the inhalation of harmful atmospheres. Respirator types: air-line; air-purifying; positive pressure; powered air-purifying; pressure-demand; self-contained breathing apparatus (SCBA); supplied-air.

**RESPIRATORY INLET COVERING:** The portion of a respirator that forms the protective barrier between the user's respiratory tract and an air-purifying device or breathing air source, or both. It may be a face piece, helmet, hood, suit, or a mouthpiece respirator with nose clamp.

**SELF-CONTAINED BREATHING APPARATUS (SCBA):** An atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

**SERVICE LIFE:** The length of time required for an air-purifying element to reach a specific effluent concentration. Service life is determined by the type of substance being removed, the concentration of the substance, the ambient temperature, the specific element being tested (cartridge or canister), the flow rate resistance, and the selected breakthrough value. The service life for a self-contained breathing apparatus (SCBA) is the period of time, as determined by the NIOSH certification tests, in which adequate breathing gas is supplied.

**SINGLE-USE DUST OR DUST AND MIST RESPIRATORS:** Respirators approved for use against particulate or mists that may cause pneumoconiosis and fibrosis.

**SUPPLIED-AIR RESPIRATOR (SAR) OR AIRLINE RESPIRATOR:** An atmosphere-supplying

respirator for which the source of breathing air is not designed to be carried by the user.

**TIGHT-FITTING FACE PIECE:** A respiratory inlet covering that forms a complete seal with the face.

**USER SEAL CHECK:** An action conducted by the respirator user to determine if the respirator is properly seated to the face.

**VAPOR:** The gaseous state of a substance that is solid or liquid at standard temperature and pressure.

## 7. EVALUATING ATMOSPHERIC HAZARDS

7.1. Any environment in which it is not possible to determine or reasonably estimate oxygen content and/or identify unknown employee contaminant exposure shall be considered an Immediately Dangerous to Life and Health (IDLH) environment. Under normal operating conditions, employees shall not work in an environment with atmosphere that is IDLH. Trained emergency responders are the only exception to this rule.

7.2. If new atmospheric testing during an operation indicates that IDLH conditions exist, that were not previously identified, the operation shall be stopped immediately and the area shall be vacated.

## 8. EQUIPMENT SELECTION, USE, AND FITTING

*Specific respirator selection shall be made available by LWD's Management based on assessment of employee exposure.*

### 8.1. Identify Respiratory Hazards

Many factors affect an employee's ability to use a respirator effectively. These factors include breathing without objectionable effort, adequate visibility under all conditions, provisions for wearing prescription glasses (if necessary), ability to communicate, ability to perform all tasks without undue interference and confidence in the face piece fit. Respirator protection factors range from 5 to 10,000. A respirator with a protection factor of five (5) can be used safely when the concentration of a known substance is up to, but not more than, 5 times the substance's Permissible Exposure Limit.

### 8.2. Maximum Use Level Calculation

The Maximum Use Level of any respirator is a calculated number dependent upon the encountered contaminants Permissible Exposure Limit (PEL) times the protection factor.

Maximum Use Level = Protection Factor x Permissible Exposure Limit

Employees shall not be allowed to use a respirator in an environment, which exceeds the Maximum Use Level for that respirator. Supervisors shall review work conditions and the specific jobs assigned to employees for identifying hazards requiring the use of a respirator.

### 8.3. Respirator Selection

If respiratory protection is required, the appropriate respirator shall be chosen by conducting a review of the following:

- A. Potential exposure to airborne contaminant
- B. Work operations to be performed
- C. Fit and comfort level of employee performing work

Employees shall only use the brand and size of respirator for which they were trained and fit



tested, and shall only use the approved respirator that was selected for the specific operation.

A respirator shall not be worn while engaged in any activity, which has been identified as resulting in exposure to dusts, mists, fumes, gases, or vapors that are outside of the maximum use level capability of that respirator.

#### 8.4. Facial Hair

CAL-OSHA TITLE 8, Section 5144(g)(1)(A)(1) specifically states that no facial hair is acceptable that is between the face and face piece. Additionally, remaining facial hair shall be groomed so as not to interfere with the face piece seal or operating parts of the respirator. Any employee who fails to maintain facial hair in this manner would not be approved to wear a respirator, even though previously fit tested with a particular device. Therefore, LWD requires all employees required to wear a seal-type respirator to be clean-shaven in the area of the face where the face piece of the respirator seals against the skin.

#### 8.5. Use of Respiratory Protection Equipment

Respiratory Protection Equipment must be approved and issued by LWD. Examples of types of respirators that may be available for use are the following:

- A. Air Purifying Cartridge Respirators
- B. Self-Contained Breathing Apparatus (SCBA)
- C. Dust Masks

Respirators that are used by multiple employees shall be properly cleaned, sanitized, and stored after every use.

The employee must immediately advise the supervisor of problems or concerns regarding the use of a respirator so they may be promptly resolved.

Failure to follow instructions and warnings on the use of the approved product and/or failure to wear the approved respirator at all times during exposure can reduce respirator effectiveness.

#### 8.6. User Seal Check for Tight Fitting Respirators

Negative Pressure Check (For Air Purifying Cartridge Respirators):

- Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s).
- Inhale gently so that the face piece collapses slightly, and hold your breath for ten seconds.
- If the face piece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

Note: The design of the inlet opening of some cartridges cannot be effectively covered with the palm of the hand. The test can be performed by covering the inlet opening of the cartridge with a thin latex or nitrile glove.

Positive Pressure Check (For SCBA Respirators):

- Close off the exhalation valve and exhale gently into the face piece.
- The face fit is considered satisfactory if a slight positive pressure can be built up inside the face piece without any evidence of outward leakage of air at the seal.

Note: For most respirators, this method of leak testing requires the user to first remove the

exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.

**9. MAINTENANCE, CLEANING, SANITIZING, AND STORAGE**

9.1. Employees are responsible for the maintenance of respirators individually issued to them. The employee must maintain the respiratory protection equipment in proper working order.

9.2. Respirators must be cleaned and sanitized after each use, and inspected before each use in accordance with training received and manufacturer's instructions. The following method shall be used when cleaning and sanitizing a respirator:

- Remove all filters cartridges, canisters, hoses and disassemble face piece per manufacturer's recommendations. This may include the speaking diaphragm, inhalation valves and exhaust valves. Discard or repair any defective parts.
- Wash components in warm water (110 degrees Fahrenheit maximum) with a cleaner/sanitizer recommended by the manufacturer. A stiff bristle brush may be used to remove dirt.
- Rinse components in clean warm, preferably running water. Drain. The importance of rinsing cannot be overemphasized. Detergents or disinfectants that dry on face pieces can be a source of dermatitis and/or may cause deterioration of rubber or corrosion of metal parts.
- Components should be hand dried or air-dried.
- Reassemble face piece, replacing all parts removed.
- Test the respirator to ensure that all parts are working correctly.

9.3. Supervisors must ensure SCBAs maintained for emergency use under their control are inspected at least monthly, and records of the inspection are maintained with the respirator, attached to, or in its storage container.

9.4. Respiratory protective equipment must be stored in a convenient, clean and sanitary location, away from direct sunlight and extreme temperatures.

9.5. The following points should be considered for respirator inspection and maintenance:

- Respirators will be inspected before each use.
- Field Services Technicians will periodically spot check respirators for fit, usage, and condition.
- Respiratory protective equipment shall be repaired or replaced as required by the manufacturer.
- SCBA regulators shall be inspected during the annual fit test and repaired as necessary.
- Respirators when not discarded will be cleaned and sanitized after each use by the assigned employee.
- Respirators shall be stored in a suitable container to protect against dust, sunlight, extreme temperatures, excessive moisture, or damaging chemicals.
- Field Services Technicians shall inspect respirators after each cleaning for fatigue of the face



piece, valves, straps, filters, cartridges, or canisters to insure proper working conditions.

#### **10. TRAINING AND FIT TESTING**

- 10.1. All personnel who use respiratory protection, and their supervisors, must be trained and fit tested as required by the respiratory protection regulation. This training shall include but not be limited to:
  - Knowledge of respiratory hazards typical to LWD activities and operations.
  - Types of respiratory equipment provided by LWD.
  - Proper use of protective devices.
  - How to properly put on and take off, and test respiratory protection equipment.
  - Sanitary care and proper storage of respiratory protective devices.
  - Inspection and maintenance procedures.
- 10.2. Equipment limitations. Employees must receive quantitative fit testing at least annually after initial training.
- 10.3. The Port-a-Count quantitative fit tester or equivalent or certified Negative Pressure test shall be used for the annual fit test in conformance with regulations. (Title 8 CCR, Section 5144, Appendix A)

#### **11. ANNUAL MEDICAL EVALUATIONS**

- 11.1. An employee must obtain initial and subsequent annual medical clearance before using a respirator.
- 11.2. This shall be accomplished by using a physician or other licensed health care professional (PLHCP) to provide an initial examination for new employees that obtains the same information as the medical questionnaire required by Title 8, Section 5144 (Appendix D), for all personnel that are required to wear respirators. Each employee may discuss the questionnaire with the examining physician.
- 11.3. A medical exam will be required for any employee that gives a positive answer to questions 1 through 8 in section 2, Part A, of the respirator medical evaluation questionnaire regarding the use of any type of respirator.
- 11.4. Departments are required to provide the PLHCP with the type of respirator used, the duration and frequency of use, the amount of effort required to do the job, any additional PPE required and the weather conditions that may be encountered.
- 11.5. The PLHCP shall provide a written recommendation to LWD and the employee concerning ability to utilize a respirator. The recommendation must identify any limitations on use and/or the need for further medical evaluations.
- 11.6. The employee's supervisor shall schedule a medical examination for the employee through the Administrative Services Supervisor. After receiving medical approval, the employee will be scheduled for fit testing on the make/model of respirator used.
- 11.7. Medical re-evaluations will occur under the following circumstances:
  - Medical signs or symptoms that affect the ability to use a respirator.
  - LWD is informed that the employee needs to be reevaluated. This includes observations made during fit testing, program evaluation and changes to the work environment.

**12. RECORD KEEPING**

- 12.1. Training records, which include employee name, date of training, name of instructor and location of the training class shall be maintained for the length of employment.
- 12.2. Fit test records that include employee name, date of test, name of PLHCP, the brand, model and size of respiratory protection shall be maintained for the length of employment.



**ATTACHMENT B  
Voluntary Use of Respirators**

Information for Employees Using Respirators When Not Required Under the Standard (Mandatory)

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If LWD provides respirators for employee voluntary use, or if an employee(s) provides their own respirator, he/she will need to take certain precautions to be sure that the respirator itself does not present a hazard.

Employees should follow these guidelines:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will inform the user what the respirator is designed for and how much it will protect the user.
3. Do not wear the respirator into atmospheres containing contaminants for which the respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect the user against gases, vapors, or very small solid particles of fumes or smoke.

**ATTACHMENT C  
LWD's Respirator Inventory List**

<b>Types of Respirators</b>	<b>Usage</b>	<b>Location(s)</b>
Single Use Dust Masks (multiple)	For tasks requiring protection against smoke, dust, paint fumes, etc.	Operations Bldg No. 200 and inside pump truck #154
Air Purifying Cartridge Respirators/ (1) Disposable Half Facemask	Petrochemicals, chemical manufacturing, and construction	Operations Bldg No. 200
One Escape Only Respirator	Used only to escape from areas in emergency situations (confined space entries)	Operations Bldg No. 300 (In confined space trailer)
Two Self-Contained Breathing Apparatus (SCBA)	Confined space entries	Operations Bldg No. 300 (in bright orange cases located in confined space trailer)