

Respiratory Protection Program



ATHERTON POLICE DEPARTMENT

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The Town of Atherton is committed to providing all employees with a safe work environment. To this end, the Town of Atherton has adopted a Respiratory Protection Program specifically for the Atherton Police Department. The proper selection and training in the use of respirators provides effective means to prevent or reduce bodily injury to officers.

I. PURPOSE

The purpose of this written program is to set forth uniform policies and procedures concerning the use of respirators by the Town of Atherton's sworn police personnel, whose assignments do not normally include contact with hazardous materials or response to the release of hazardous materials. This plan sets the minimum standards to comply with California Code of Regulations, Title 8, Section 5144, as it pertains to the use of air-purifying respirators (APRs) and powered air-purifying respirators (PAPRs).

II. SCOPE

This program covers equipment selection, medical screening, fit testing, training, use and maintenance of respirators to be used by sworn officers. The expenses associated with training, medical evaluations and respiratory protection equipment will be provided by the employer.

III. PROGRAM ADMINISTRATION

The Chief of Police or his designee of the Police Department has the overall authority and responsibility for the implementation and maintenance of the respiratory protection program. That person shall be knowledgeable about the requirements of Section 5144 of Title 8 of the California Code of Regulations and all elements of the respiratory protection program.

The program administrator is responsible for ensuring that all officers designated to use respirators are included in this program, and that the program is implemented in a consistent manner throughout the department.

Responsibilities

Organizational Responsibility Chart		
Personnel	Program Function	Records (Forms) Maintained
Police Management	Administration of Program <ul style="list-style-type: none"> • Oversight • Updates • Cartridge Change-Out Schedule • Inventory & Stocking 	<ul style="list-style-type: none"> • Respirator Program Evaluation
On-Site Vendor	Medical Evaluation of workers requiring use of respirators Fit Testing – Qualitative/Quantitative	Results from licensed health care provider evaluation
Training Mgr.	Respirator <ul style="list-style-type: none"> • Selection & Issuance 	<ul style="list-style-type: none"> • fit testing records • Respirator Inspection • Medical clearance forms • Records/Documentation Of Training

IV. APPROVED EQUIPMENT

The National Institute shall approve all respiratory protective equipment for Occupational Safety and Health (NIOSH) for the environment in which it is going to be used. The Town of Atherton receives its equipment through the Office of Emergency Services and the gas mask issued is currently the MSA Millennium MD clear. The following definitions apply to equipment that will be issued to officers under this program:

Air-purifying respirator (APR) means a respirator that works by removing gas, vapor, or particulate, or combinations of gas, vapor, and/or particulate from the air through the use of filters, cartridges, or canisters that have been tested and approved for use in specific types of contaminated atmospheres by NIOSH. This respirator does not supply oxygen and therefore cannot be used to enter an atmosphere that is oxygen deficient.

Powered air-purifying respirator (PAPR) means air-purifying respirator that uses a blower to force ambient air through air-purifying elements to

the respirator face piece or hood.

Note: Cartridges, canisters and filters are approved for use against specific hazards where the concentration is known or can be reasonably estimated. Some combination organic vapor/particulate cartridges and canisters are approved for use against CS and CN tear gas.

V. RESPIRATOR SELECTION

The program administrator shall maintain records on the type of equipment provided to officers and under what circumstances the equipment is to be used.

Recommended Equipment Use Chart

Respirator Use	Respirator Type	Manufacturer/model
Escape from chemical/biological/nuclear incidents	CBRN approved escape hood (not yet available)	
Perimeter hazmat incidents with specific industrial chemicals	Full face piece (NIOSH approval TC 14G) combination cartridge or as specified by the hazmat incident commander	
Perimeter chemical/biological/nuclear incident	Full face piece (gas mask) with CBRN approval (not yet available)	
Perimeter crowd control (CS or CN tear gas)	Full face piece (gas mask), TC 14G chloracetophenone cartridge or canister (combination organic vapor/particulate)	
Activation within crowd control area (CS or CN tear gas)	Full face piece (gas mask) TC 14G chloracetophenone cartridge or canister (combination organic vapor/particulate)	
Respiratory illness (TB, SARS, etc)	N-95 particulate respirator TC - 84A	

Powered Air Purifying Respirators

Officers in this program will be issued Powered Air Purifying Respirators (PAPR) under the following conditions:

- a. The physician or other licensed health care professional (PLHCP) recommends the use of a PAPR for medical reasons.
- b. The officer cannot be successfully fit-tested for a tight-fitting face piece. These officers shall be issued a PAPR with a loose-fitting hood or helmet.
- c. The officer requests a PAPR.

VI. MEDICAL EVALUATION

Personnel are considered medically qualified to use respiratory protective equipment after completing the POST Medical History Statement (POST 2-252) or its equivalent and successfully passing a physical examination that occurs as a condition of employment.

The pre-employment physical must meet or exceed the standards described in the POST Medical Screening Manual for California Law Enforcement.

Employees who were hired prior to the implementation of the POST Medical History Statement (POST 2-252) shall complete the Cal/OSHA medical questionnaire and medical personnel shall review it.

For existing officers, due to potential exposure to high stress environments, changes in fitness levels and possible onset of confidential health conditions, it is anticipated that all officers will undergo annual medical review and clearance by a PLHCP.

Medical evaluations are required for any officer when:

1. An officer reports medical signs or symptoms that are related to the ability to use a respirator,
2. A physician or other licensed health care professional (PLHCP), a supervisor, or the Program Administrator informs the agency that an officer needs to be re-evaluated,
3. Observations made during fit testing and program evaluation indicate a need for re-evaluation, or
4. A change occurs in workplace conditions (e.g., physical work effort, protective clothing, temperature) that may result in a substantial increase in the physiological burden placed on an officer.

VII. FIT TESTING

1. The Fit Test procedure shall be administered in accordance with Appendix A of Section 5144 of Title 8 of the California Code of Regulations.
2. Before an officer is required to use any respirator with a tight-fitting face

piece (APR/PAPR), the officer must be fit tested with the same make, model, style, and size of respirator to be used.

3. Fit tests shall be provided at the time of initial assignment and at least annually thereafter. Additional fit tests shall be provided whenever the officer, employer, PLHCP, supervisor, or program administrator makes visual observations of changes in the officer's physical condition that could affect respirator fit. These conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.
4. Prior to the fit test, the officer shall be shown the proper procedures for donning a respirator. The officer shall demonstrate donning the respirator, adjust the straps, and perform positive and negative pressure fit checks.
5. Officers who wear corrective glasses or other personal protective equipment must be sure that such equipment is worn in a manner that does not interfere with the face piece seal. The glasses or personal protective equipment that must be worn with the respirator shall be taken to the fit-test assessment and worn during the test.
6. Officers who are issued tight-fitting face piece gas/vapor air purifying respirators (gas masks) shall be provided with either a qualitative (employee response to test agent) or quantitative (numerical measurement of leakage) method fit test. Agencies must indicate in their department program records which test was utilized and the results of the tests.
7. An escape hood is not a tight-fitting face piece and need not be fit tested. Officers who are issued escape hoods shall practice donning and removing the hood during training.

VIII. RESPIRATOR USE

Escape: For escape from the release of hazardous materials, officers will be provided with the Millennium 2000.

- Air purifying Escape Hoods
- Combination cartridge air-purifying Respirator
- CBRN approved air-purifying respirator
- Other

Entry: Respirators issued under this program shall not be used to enter any area that is designated as the exclusion ("hot" or "red") zone, or the contaminant reduction ("warm" or "yellow") zone of a hazardous materials incident. They also should not be used to enter any areas that are known or suspected to be oxygen deficient, or that contain concentrations of hazardous substances that are unknown or are immediately dangerous to life or health (IDLH). Respirator use shall not conflict with the agency's emergency response plan.

Continuous duty: For continuous duty in maintaining the perimeter of hazardous materials or crowd control incidents, approved gas masks and other air-purifying respirators shall be used. Respirators shall be selected that are approved for the contaminants that are believed to be present, and wearers shall not be located in atmospheres in which concentrations exceed the protection factor of the respirator. The program administrator or incident commander shall determine a cartridge change schedule.

Breakthrough: If an officer detects breakthrough, the officer shall exit the area immediately, or as soon as safety conditions permit, remove the respirator and perform decontamination procedures. Breakthrough shall be reported to the incident commander or officer in charge. The incident commander or officer in charge shall re-evaluate potential exposures and determine whether it is necessary to re-define the incident perimeter.

Note: Some contaminants are detectable at levels that are below Cal/OSHA permissible exposure limits. Therefore, detection of contaminants by a respirator user does not necessarily mean that officers are being exposed above the concentrations permitted under this program.

TB and other infectious airborne diseases: Particulate respirators shall be used when an officer is in sustained contact (including transport in a closed vehicle) with a person who is suspected of carrying an active infection with a serious airborne respiratory disease (such as tuberculosis), and who cannot be masked. Used respirators shall be discarded in appropriate containers, in accordance with the department's infection control procedures.

IX. TRAINING

All officers will receive respirator training annually (or more frequently if necessary). The training shall include the following:

1. The specific circumstances under which respirators are to be used, including illustrative scenarios that identify the proper use by officers.
2. Why the respirator is necessary; how proper fit, proper usage, and maintenance can ensure the protective effect of the respirator.
3. What the respirator's limitations and capabilities are in terms of protecting against chemical agents and other respiratory hazards.
4. How to effectively use the respirators in emergency situations, including situations when the respirator malfunctions.
5. How to inspect, put on, remove, use, and check the seals of the respirator.
6. How to maintain and store the respirator. Officers who are issued PAPRs shall be instructed in procedures for charging and maintaining the batteries, and for checking the flow rate.
7. How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
8. How to decontaminate (or safely dispose of) a respirator that has been contaminated with chemicals or hazardous biological materials.

Additional training shall be provided when there is a change in the type of respiratory protection used, or when inadequacies in the officer's knowledge or use of the respirator indicate that he/she has not retained the requisite understanding or skill. This training can be accomplished by in-house training, viewing the POST video on respiratory protective equipment use, or a combination of both.

X. MAINTENANCE

Respirators are to be maintained at all times in order to ensure that they function properly and adequately protect the employee. On a monthly basis, at a minimum, at the beginning of their shift, every officer shall inspect the device for defects according to the training received. If a defect is found during inspection, the respirator shall be returned to the Commander for replacement.

Cleaning and Disinfecting

Each officer shall be provided with a respirator that is clean, sanitary, and in good working order. The department will ensure that respirators are cleaned and disinfected at the following intervals:

1. Respirators issued for the exclusive use of an officer shall be cleaned and disinfected as often as necessary to maintain a sanitary condition.
2. Respirators maintained for emergency use shall be cleaned and disinfected after each use.
3. Respirators used in fit testing and training shall be cleaned and disinfected after each use (before being used by another person).
4. Respirators that have been contaminated with certain chemical, biological, or radioactive (CBRN) agents require special decontamination procedures to reduce the likelihood of secondary exposures to the user or assisting personnel. Users will be informed of any special decontamination procedures that are required.

Storage

All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals. They shall be packed or stored to prevent deformation of the face piece and exhalation valve.

To protect the integrity of the equipment, officers will follow the manufacturer's recommendation for storage. The Program Administer will maintain records of where all equipment is stored. The Program Administer will provide a storage area that has the capability to charge the PAPR batteries when they are not in use.

Recommended Storage Location Chart

Type of respirator	Storage
Millennium 2000	Officer's Locker in Gas Mask Carriers

Inspection

Single-use particulate respirators shall be inspected prior to use. All other respirators shall be inspected annually. Inspections should include a check of:

1. Respirator function, tightness of connections, condition of the various parts including, but not limited to, the face piece, head straps, valves, and cartridges, canisters or filters.

2. All rubber or plastic parts for pliability and signs of deterioration.
3. PAPR connecting tubes or hoses and batteries.

Each annual inspection shall include donning the respirator and performing positive and negative pressure fit checks. An inspection log shall be kept on site.

Repairs

Any defective respirators shall be removed from service, and shall be adjusted, repaired or discarded as appropriate. Defective equipment will be turned into the Commander and a replacement respirator will be issued.

Only persons who have been trained to perform such operations shall make repairs or adjustments to respirators. All repairs shall be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed, using only the manufacturer's NIOSH-approved parts.

XI. PROGRAM EVALUATION

The program administrator will conduct a periodic review of the agency's program to ensure the agency adheres to all subsections of this program.

XII. RECORD KEEPING

The program administrator is responsible for ensuring that proper records are kept for this program. This includes:

1. Personnel medical records shall be retained and made available in accordance with the California Code of Regulations, Section 3204, Title 8, for a minimum of thirty (30) years after an employee's separation or termination.
2. Documentation of training, inspection and maintenance.
3. Documentation of fit testing, including:
 - Type of test (quantitative)
 - Name or ID of employee
 - Make, model, style and size of respirator tested
 - Date of test
 - Results of the fit test

A copy of this program and the above records shall be made available to all affected employees, their representatives, and representatives of the Chief of the Division of Occupational Safety and Health.

APPENDICES

APPENDIX A

Referral for Medical Evaluation

Dear Dr. _____:

We have discussed respirator use with (employee) _____ and we feel that a medical examination before wearing a respirator is prudent. Attached is a job description, the respirator to be used, and other relevant information.

After the exam, please complete the following and return to this office.

Program Administrator: _____

Based on my evaluation and opinion, _____.
(Employee Name)

_____ has a condition that makes respirator use inadvisable.

_____ has no limitations.

_____ is approved for respirator fit testing and assignment subject to the following limitations:

Physician's Signature

Date

APPENDIX B

General Medical Exam Requirements

Periodic medical exams available to all respirator wearers, at no cost.

The Town of Atherton will comply with the following requirements when providing a medical examination performed by or under the supervision of a licensed physician to evaluate an employee's ability to wear a respirator:

- A. The employer shall provide the physician with the following information in writing:
 - 1. A description of the respiratory hazard;
 - 2. The type of respirator to be used;
 - 3. The expected duration and frequency of use;
 - 4. The nature of the work to be performed including the level of physical effort involved;
 - 5. Any special environmental conditions, including temperature extremes, use of protective clothing and confined space.

- B. The employer shall obtain and consider the physician's written recommendation as to any restrictions on the employee's ability to wear the respirator under the conditions of intended use.
 - 1. The employer shall instruct the physician to:
 - a. Not reveal in the written recommendation any specific medical findings or diagnoses; and
 - b. Not reveal to the employer, by any means, medical findings or diagnoses unrelated to the employer's ability to wear a respirator or to perform the job.

 - 2. The employer shall provide a copy of the written recommendation to the employee.

APPENDIX C

Checklist for Medical Evaluation

- ❑ All employees have been evaluated to determine their ability to wear a respirator prior to being fit tested for or wearing a respirator for the first time in your workplace.
- ❑ A physician or other licensed health care professional (PLHCP) has been identified to perform the medical evaluations.
- ❑ The medical evaluations obtain the information requested in Part A of Appendix C of the Cal/OSHA Respiratory Protection Standard (CCR Title 8, Section 5144), or if their initial medical evaluation reveals that a follow-up exam is needed.
- ❑ Employees are provided follow-up medical exams if they answer positively to any of questions 1 through 8 in Section 2, Part A of Appendix C of the Cal/OSHA regulation (CCR Title 8, Section 5144), or if their initial medical evaluation reveals that a follow-up exam is needed.
- ❑ Medical evaluations are administered confidentially during normal work hours and in a manner that is understandable to employees.
- ❑ Employees are provided the opportunity to discuss the medical evaluation results with the PLHCP.
- ❑ The following supplemental information is provided to the PLHCP before he or she makes a decision about respirator use:
 - ❑ Type and weight of the respirator.
 - ❑ Duration and frequency of the respirator use.
 - ❑ Expected physical work effort.
 - ❑ Additional protective clothing to be worn.
 - ❑ Potential temperature and humidity extremes.
 - ❑ Written copies of the Respiratory Protection Program and the Respiratory Protection standard.
- ❑ Written recommendations are obtained from the PLHCP regarding each employee's ability to wear a respirator, and that the PLHCP has given the employee a copy of these recommendations.

- Employees who are medically unable to wear a negative pressure respirator are provided with a powered air-purifying respirator (PAPR) if they are found by the PLHCP to be medically able to use a PAPR.

- Employees are given additional medical evaluations when:
 - The employee reports symptoms related to his ability to use a respirator.
 - The PLHCP, respiratory protection program administrator or supervisor determines that a medical re-evaluation is necessary.
 - Information from the respiratory protection program suggests a need for re-evaluation.
 - Workplace conditions have changed in a way that could potentially place an increased burden on the employee's health.

APPENDIX D

Positive and Negative Fit Check Procedures

Positive Pressure Fit Check

1. Close off the exhalation valve by placing the palm of the hand over the valve. On some respirators, the exhalation valve cover may have to be removed.
2. Breathe out *gently*. Air will escape through the respirator if there are face seal gaps, or through the inhalation valves if there is a malfunction of the valves or valve seat or if the cartridges are not seated properly.
3. If a leak is detected, examine the respirator for possible deterioration or needed repairs. Ensure that the respirator is removed from service and repaired before attempting to repeat the fit check.
4. If a slight positive pressure can be built up inside the facepiece without any evidence of outward leakage of air at the seal, then the fit is considered satisfactory.
5. The positive pressure fit check must be satisfactorily passed before respirator use.

Negative Pressure Fit Check

1. Close off the respirator inlet or inhalation valve using the palm of the hand over the cartridge covering the valve. If the cartridge design does not allow effective coverage using the palm of the hand, a thin latex or nitrile glove can be used to instead to cover the cartridge.
2. *Gently* inhale to create a slight vacuum in an attempt to cause a parallel inward collapse of the face piece.
3. Maintain the vacuum inside the respirator for at least 10 seconds.
4. If a leak is detected, examine the respirator for possible deterioration or needed repairs. Ensure that the respirator is removed from service and repaired before attempting to repeat the fit check.

5. If the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.
6. The negative pressure fit check must be satisfactorily passed before respirator use.

APPENDIX E

Respirator Selection General Guidelines Checklist

- Respiratory hazards in the workplace have been identified and evaluated.
- Employees exposures that have not been, or cannot be, evaluated are considered IDLH.
- Respirators are NIOSH certified and used under the conditions of certification.
- Respirators are selected based on the workplace hazards evaluated and workplace and user factors affecting respirator performance and reliability.
- A sufficient number of respirator sizes and models are provided to be acceptable and correctly fit the users.
- For IDLH atmospheres:
 - Full facepiece pressure demand SARs with auxiliary SCBA unit or full facepiece pressure demand SCBAs, with a minimum service life of 30 minutes, are provided.
 - Respirators used for escape only are NIOSH certified for the atmosphere in which they will be used.
 - Oxygen deficient atmospheres are considered IDLH.
- For non-IDLH atmospheres:
 - Respirators selected are appropriate for the chemical state and physical form of the contaminant.
 - Air-purifying respirators used for protection against gases and vapors are equipped with end-of-life service indicators or a change schedule has been implemented.
 - Air-purifying respirators used for protection against particulates are equipped with NIOSH-certified HEPA filters or other filters certified by NIOSH for particulates under Section 42 CFR, part 84.

APPENDIX F

Respirator Selection Worksheet for Identified Work Condition

1. Material:
 - a. Chemical name _____
 - b. Trade name _____ CAS# _____
 - c. PEL (OSHA 1910.1000) _____ e. TLV (ACGIH) _____
2. Form in use:
 - a. Liquid? _____ b. Solid? _____ c. Gaseous? _____
 - b. If gaseous, is it an organic vapor? _____ e. acid gas? _____
 - c. Other? _____
3. Maximum expected concentration:
 - a. _____ parts per million (ppm)
 - b. _____ milligrams per cubic meter (mg/m³)
4. Will material be heated? No _____ Yes _____
If yes, to what temperature _____ °F. or _____ °C.
5. What is the odor threshold of the material? _____
6. At what concentration is the material considered to be toxic? _____ ppm
7. Can the substance be absorbed through the skin? _____
8. Irritant to: eyes? _____ respiratory tract? _____ skin? _____
9. At what concentration is it an irritant? _____
10. If the substance is flammable, what is the LEL _____ UEL _____

11. What is the vapor pressure of the material? _____
12. Will material be mixed with other chemicals? Yes No
If yes, give details: _____
13. Is there a possibility of oxygen deficiency? _____
14. Can good ventilation of the area be maintained? _____
15. Will exposure be continuous or intermittent? _____
16. Will the respiratory device be used for routine exposures or as an escape device? _____
17. Provide as much detail as possible concerning exposure conditions: _____

APPENDIX G

Fit Testing Procedures

Fit testing may be performed using either qualitative (subjective) or quantitative (objective) methods. NOTE: For full face respirators requiring a fit factor of 500 or greater, testing should be performed using quantitative methods only to insure proper filtration and documentation of fit factor.

Quantitative Fit Test (QNFT) Protocols

The following quantitative fit testing procedures have been demonstrated to be acceptable: Quantitative fit testing using a non-hazardous test aerosol (such as corn oil, polyethylene glycol 400 [PEG 400], di-2-ethyl hexyl sebacate [DEHS], or sodium chloride) generated in a test chamber, and employing instrumentation to quantify the fit of the respirator; Quantitative fit testing using ambient aerosol as the test agent and appropriate instrumentation (condensation nuclei counter) to quantify the respirator fit; Quantitative fit testing using controlled negative pressure and appropriate instrumentation to measure the volumetric leak rate of a facepiece to quantify the respirator fit.

1. General

(a) The employer shall ensure that persons administering QNFT are able to calibrate equipment and perform tests properly, recognize invalid tests, calculate fit factors properly and ensure that test equipment is in proper working order.

(b) The employer shall ensure that QNFT equipment is kept clean and is maintained and calibrated according to the manufacturer's instructions so as to operate at the parameters for which it was designed.

2. Generated Aerosol Quantitative Fit Testing Protocol

Apparatus

1. Instrumentation. Aerosol generation, dilution, and measurement systems using particulates (corn oil, polyethylene glycol 400 [PEG 400], di-2-ethyl hexyl sebacate [DEHS] or sodium chloride) as test aerosols shall be used for quantitative fit testing.

2. Test chamber. The test chamber shall be large enough to permit all test subjects to perform freely all required exercises without disturbing the test agent concentration or the measurement apparatus. The test chamber shall be equipped and constructed so that the test agent is effectively isolated from the ambient air, yet uniform in concentration throughout the chamber.

3. When testing air-purifying respirators, the normal filter or cartridge element shall be replaced with a high efficiency particulate air (HEPA) or P100 series filter supplied by the same manufacturer.
4. The sampling instrument shall be selected so that a computer record or strip chart record may be made of the test showing the rise and fall of the test agent concentration with each inspiration and expiration at fit factors of at least 2,000. Integrators or computers that integrate the amount of test agent penetration leakage into the respirator for each exercise may be used provided a record of the readings is made.
5. The combination of substitute air-purifying elements, test agent and test agent concentration shall be such that the test subject is not exposed in excess of an established exposure limit for the test agent at any time during the testing process, based upon the length of the exposure and the exposure limit duration.
6. The sampling port on the test specimen respirator shall be placed and constructed so that no leakage occurs around the port (e.g., where the respirator is probed), a free air flow is allowed into the sampling line at all times, and there is no interference with the fit or performance of the respirator. The in-mask sampling device (probe) shall be designed and used so that the air sample is drawn from the breathing zone of the test subject, midway between the nose and mouth and with the probe extending into the facepiece cavity at least 1/4 inch.
7. The test setup shall permit the person administering the test to observe the test subject inside the chamber during the test.
8. The equipment generating the test atmosphere shall maintain the concentration of test agent constant to within a 10 percent variation for the duration of the test.
9. The time lag (interval between an event and the recording of the event on the strip chart or computer or integrator) shall be kept to a minimum. There shall be a clear association between the occurrence of an event and its being recorded.
10. The sampling line tubing for the test chamber atmosphere and for the respirator sampling port shall be of equal diameter and of the same material. The length of the two lines shall be equal.
11. The exhaust flow from the test chamber shall pass through an appropriate filter (i.e., high efficiency particulate filter) before release.
12. When sodium chloride aerosol is used, the relative humidity inside the

test chamber shall not exceed 50 percent.

13. The limitations of instrument detection shall be taken into account when determining the fit factor.

14. Test respirators shall be maintained in proper working order and be inspected regularly for deficiencies such as cracks or missing valves and gaskets.

Respirator Selection

1. The test subject (the employee) shall be allowed to select the most acceptable respirator from among a sufficient number of respirator models and sizes so that the respirator is acceptable to the employee and correctly fits the employee.
2. Prior to selecting a respirator, the test subject shall be given a review of:
 - How to put on a respirator.
 - How the respirator should be positioned on the face.
 - How to set the strap tension.
 - How to determine an acceptable fit.

A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator.

NOTE: This review does not constitute formal training, its purpose is to help the employee make the proper respirator selection.

3. Explain to each test subject that:
 - He/she is to select the respirator that provides the most acceptable fit.
 - Each respirator has a different size and shape, and if fitted and used properly, the respirator will provide the employee with adequate protection.
4. Each test subject shall be instructed on how to hold each face piece up to his/her face, then any face piece that obviously does not give an acceptable fit can be eliminated.
5. Those respirators which are potentially acceptable for the test subject should be noted.

- Have the subject put on the most comfortable mask, wearing it for least five minutes to assess its comfort.
 - If the test subject is not familiar with the how to use a particular respirator, he/she must be instructed on how to don the mask several times and how to adjust the straps each time to become adept at setting the proper strap tension.
6. Use the following points to assist in determining the comfort level of each face piece:
- Position of the mask on the nose.
 - Room for eye protection.
 - Room to talk.
 - Position of mask on the face and cheeks.
7. The following criteria shall be used to help determine the adequacy of the respiratory fit:
- Chin properly placed.
 - Adequate strap tension, not too tight.
 - Fit across nose bridge.
 - Proper size of respirator so that it covers the distance from nose to chin.
 - Tendency of the respirator to slip.
 - Self-observation in the mirror to evaluate the fit and position.

Odor Threshold Screening

Employees should select the proper size respirator. Employees should don the respirator, position the face piece and head straps and adjust the strap tension to make the respirator comfortable. Assessing the comfort involves reviewing the:

- face piece positioning on the face at the chin and nose bridge.
- strap tension and tendency to slip.
- use of safety glasses and other personal protective equipment.

Employees should try on the different face pieces available and eliminate those which are obviously not comfortable. Once the most comfortable face piece is selected, the employee puts on the equipment and conducts the positive and negative pressure fit checks.

If the respirator does not pass the fit check, the face piece and/or straps are readjusted, and the fit check is tried again. If the respirator still does not pass the fit check, a different face piece is selected, and the fit checks are repeated.

Under no circumstances shall an employee be permitted to wear a respirator that does not pass the fit checks.

Once the fit checks are passed, the employee should then wear the respirator in normal atmosphere for at least five minutes to make sure the fit remains comfortable.

User Seal Check Test

General Requirements:

A user seal check must be conducted by each test subject. This can be done using either the negative and positive pressure seal checks described below or those recommended by the respirator manufacturer so long as they provide protection equivalent to that found in Appendix B-1 of this regulation.

- Before conducting the negative and positive pressures, have the test subject seat the mask on the face by moving his/her head from side-to-side and then up and down slowly while taking in a few slow deep breaths.
- If the test subject fails the user seal check test, another facepiece must be selected and retested for him/her.
- If there is any hair growth between the skin and the facepiece sealing surface (i.e., stubble beard growth, beard, mustache or sideburns) which cross the respirator sealing surface, a fit test will not be conducted.
- If any type of apparel interferes with a satisfactory fit, it must be altered or removed.
- If a test subject shows any signs of breathing difficulties during fit testing, he or she shall be referred to a physician or other licensed health care professional to determine if the employee can wear a respirator while performing his or her duties.
- If it is found that the fit of the respirator is unacceptable, the test subject shall be given the opportunity to select another respirator.

Procedure for Conducting the User Seal Check Test:

The purpose of conducting the user seal check test is to ensure that an adequate seal is achieved each time the respirator is worn. This is to be done using *either* the negative or positive pressure check described below or using the manufacturer's recommended user seal check method.

Fit Test Exercises

General Requirements:

The respirator to be tested must be worn at least five minutes before the fit testing begins. The following shall be given to each test subject before beginning the fit test:

- A description of the fit test.
- A description of his/her responsibilities during the test procedure.
- A description of the test exercises that the subject will be performing.

The fit test must be conducted while the test subject is wearing any applicable safety equipment that may be worn during actual respirator use which would interfere with the respirator fit.

Procedures for Conducting Fit Test Exercises:

The following test exercises are to be performed for all fit testing methods prescribed in this appendix (excluding the CNP method). The test subject shall perform the exercises, in the test environment, using the following procedures:

- While in a normal standing position, the subject shall breathe normally without talking.
- While in a normal standing position, the subject shall breathe slowly and deeply, being cautious not to hyperventilate.
- Standing in place, the subject shall turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.
- Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (while looking toward the ceiling).
- The subject shall talk out loud slowly and loud enough so as to be heard clearly by the person conducting the test. The subject may read from any prepared text such as the "Rainbow Passage," count backward from 100, or recite a memorized poem or song.
- The test subject shall grimace by smiling or frowning.

- ❑ The test subject shall bend at the waist as if he/she were to touch her/his toes. For environments that do not permit bending over at the waist, jogging in place shall be substituted.
- ❑ Normal breathing in the same manner described above.
- ❑ Each test exercise must be performed for one minute except for the grimace exercise, which is to be performed for fifteen seconds.
- ❑ Upon completion of the test procedure, the test subject shall be questioned by the test conductor about the comfort of the respirator. If the respirator fit comfort becomes unacceptable, another model must be tried.
- ❑ Once the fit test begins, the respirator must not be adjusted, as any adjustments voids the test, and the test must then be repeated.

Fit Test Protocol

General Requirements:

- Fit test hood
 - Supply of paper towels and sealable or self-sealing bags
1. Each respirator used for the fitting and fit testing must be equipped with organic vapor cartridges or offer protection against organic vapors.
 2. After selecting, donning, properly adjusting the respirator and performing positive and negative pressure fit checks, the test subject will indicate they are ready to be fit tested.
 3. Place the fit test hood over the subject's head. Have the test subject perform the following exercises in the order listed for 1-minute durations each.
 - a. Breathing normally.
 - b. Breathing deeply.
 - c. Turning head from side to side, stopping at each end of travel for at least two breaths.
 - d. Moving head up and down, holding at each end for one to two breaths.
 - e. Talking, reciting the alphabet, counting or reading a prepared text.
 4. If failure occurs, the subject should return to the selection room and remove the respirator, repeat the odor sensitivity test, select and put on another respirator, return to the test chamber, and repeat the fit test procedures and exercises (step 3). Repeat the process until a respirator that fits well has been found. Odor sensitivity usually will have returned by this time.

Rainbow Passage Text

“When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.”

Reading the “Rainbow Passage” results in a wide range of facial movements and helps test for a good facial fit.

APPENDIX H

Respirator Fit Test Record

Name: _____

POST ID # _____ Title _____

	Mfr.	Model	Size
Respirator(s) selected:	(1) _____	_____	_____
	(2) _____	_____	_____
	(3) _____	_____	_____

Odor Sensitivity Test (check) 0.4 ND 0.4 ml stock/500 ml water

Taste Sensitivity Test (check) 10 20 30 ND

squeezes: _____

Conditions which may affect respirator Fit Test: (check)

- Facial Scar Wrinkles Other (describe) _____
Dentures Absent Ruptured Eardrum

Respirator

Respirator Test Performed	1			2			3			4		
Positive pressure	P	F	N	P	F	N	P	F	N	P	F	N
Negative pressure	P	F	N	P	F	N	P	F	N	P	F	N
Saccharin	P	F	N	P	F	N	P	F	N	P	F	N

(P = Passed, F = Failed, N = Not run)

Mfr. _____ Model _____ Size Respirator(s) assigned:
 (1) _____
 (2) _____

Prescription eyeglass adapter required for full face piece? Yes No

Comments: _____

I have received respirator protection training/fitting and understand the conditions under which it is to be used.

Employee Signature: _____ Tested By: _____

APPENDIX I

Respirator Inspection Record

1. Name: _____ Date: _____

2. Respirator Type/Number: _____

Face-Piece	Yes/No	Comments
Cracks, tears, holes?		
Facemask distortion?		
Cracked or loose lenses/face shield?		

Head straps	Yes/No	Comments
Cracks, tears, holes?		
Broken buckles?		

Valves	Yes/No	Comments
Cracks, tears, holes?		
Residue or dirt?		

Filters/Cartridges	Yes/No	Comments
Cracks, tears, holes in housing?		
Gaskets in good condition?		
Proper cartridge for the hazard?		
Approval designation?		

APPENDIX J

Respiratory Protection Program Evaluation

Respiratory Protective Equipment Selection

Yes No N/A

- Are work area conditions and worker exposures properly surveyed?
- Are respirators selected on the basis of hazards to which worker is exposed?
- Are selections made by individuals knowledgeable in proper selection procedures?
- Are only approved respirators purchased and used?
- Do they provide adequate protection for specific hazards and contaminant concentrations?
- Where practical, have respirators been issued to the users for their exclusive use and are there records covering issuance?
- Has a medical evaluation of the prospective user been made to determine physical and psychological ability to wear the selected respiratory protective equipment?

Wearer Acceptance

Respirator wearers shall be consulted with on a periodic basis to re-evaluate the acceptance of their respirators. The following factor shall be assessed:

Yes No N/A

- Is the comfort of the respirator acceptable for the wearer?
- Is the respirator causing the wearer any difficulties with breathing resistance?
- Are there any problems with the wearer experiencing fatigue?
- Is the respirator causing any vision interference for the wearer?
- Is the respirator interfering with the wearer's ability to communicate?
- Is the respirator causing any movement restriction for the wearer?
- Is the respirator interfering with the wearer's job performance?
- Are there any concerns about the level of protection provided by the respirator?

Respiratory Protective Equipment Fitting

Yes No N/A

- | | | | |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are the users given opportunity to try on several respirators to determine whether the respirator they will subsequently be wearing is the best fit? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Is the respirator fit tested at appropriate intervals? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are those users who require corrective lenses properly fitted? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Is the face piece to face seal tested in a test atmosphere? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are workers prohibited from entering contaminated work areas when they have facial hair or other characteristics that reduce the effectiveness of tight-fitting face pieces? |

Respirator Use in the Work Area

Yes No N/A

- | | | | |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are respirators being worn correctly (e.g., head covering over respirator strap)? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are workers keeping respirators on all the time while in designated use area? |

Maintenance of Respiratory Protective Equipment

Yes No N/A

- | | | | |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are respirators cleaned and disinfected after each use? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are proper methods of cleaning and disinfecting used? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are respirators stored in a manner to protect them from dust, sunlight, heat, excessive cold, moisture, or damaging chemicals? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are respirators stored properly in a storage facility to prevent them from deformation? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Is storage in lockers and toolboxes permitted only if the respirator is in a carrying case or carton? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are respirators inspected before and after each use and during cleaning? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are qualified individuals/users instructed in inspection techniques? |

- Is respiratory protective equipment designated as “emergency use” equipment inspected at least monthly (in addition to after each use)?
- Is a record kept of the inspection of “emergency use” respiratory protective equipment?
- Are replacement parts made by the manufacturer of the respirator?

Special Use Conditions

Yes No N/A

- Is a procedure developed for using respiratory protective equipment in atmospheres that are immediately dangerous to life or health (IDLH)?
- Is a procedure developed for using equipment for entry into confined spaces?

Training

Yes No N/A

- Are users trained in proper respirator use, cleaning and inspection?
- Are users trained in the basis for selecting respirators?
- Are users evaluated, using competency-based evaluation, before and after training?

APPENDIX L

Respirator Fit Test Record						
A.	Employee:				Date:	
	Employee No					
	Employee Job Title/Description:					
B.	Employer:	Town of Atherton				
	Location/Address:	80 Fair Oaks Lane, Atherton, CA 94027				
C.	Respirator Selected:	Millennium			Mask Size:	
	Manufacturer:	MSA			Serial #:	
D.	Conditions which could affect respirator fit:					
	Clean Shaven:			Facial Scar:		
	1-2 Days Beard Growth:			Dentures Absent:		
	2 + Days Beard Growth:			Glasses:		
	Moustache:			None:		
	Comments:					
E.	Fit checks:					
	Negative Pressure:	Pass:		Fail:		Not Done:
	Positive Pressure:	Pass:		Fail:		Not Done:
F.	Fit Testing:					
	Quantitative:	Fit Factor:				
	Qualitative:	Saccharin:	Bitrex:	Smoke:		
		Pass	Pass	Pass		
	Comments:					
G.	Employee acknowledgement of test results:					
	Employee Signature:				Date:	
	Test Conducted By:				Date:	
DISCLAIMER						
<p>The above respirator fit test was performed on and by the persons listed. The results indicate the performance of the listed respiratory protective device, as fitted on the employee named on this record under controlled conditions. Fit testing as performed, measures the ability of the respiratory protective device to provide protection to the individual tested. Allegro or the Test Conductor express or imply no guarantee that this or an identical respiratory protective device will provide adequate protection under conditions other than those present when this test was performed. Improper use, maintenances or application of this or any other respiratory protective device will reduce or eliminate protection.</p>						