CITY OF SACRAMENTO REGULATORY COMPLIANCE PROGRAM
TOPIC: RESPIRATORY PROTECTION PROGRAM
EFFECTIVE DATE: 3/14/11
SUPERSEDES: API #10
SECTION: RCP #10

PURPOSE

This regulatory compliance program (RCP) serves as the City of Sacramento's Respiratory Protection Program (RPP). Its primary objective is to protect employees against occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors. This RCP provides guidance to managers and staff on the City's Respiratory Protection Program. It applies to all employees required to use respiratory protection, as well as to all employees whose use of respiratory protection is voluntary, in order to ensure compliance with the California Code of Regulations, Title 8, Sections 5144 (8CCR5144) and 3204 (8CCR3204). Definitions of the RCP terms are found in Attachment A.

RESPONSIBILITIES

1. **Department Managers or his or her designee will:**

    a. Ensure that the written RPP is implemented throughout his or her department;

    b. Coordinate with Environmental Health and Safety (EH&S) to study worksite-specific procedures, operations, facilities, and equipment to determine employee exposure to harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors as needed;

    c. Whenever practical, use engineering and/or administrative controls to reduce employee exposure to atmospheric contamination;

    d. When engineering and administrative controls are not sufficient, provide employees with appropriate respiratory protection equipment, training, medical evaluations and annual fit testing at no cost to the employees;

    e. Implement specific worksite procedures describing when and how respirators will be used during routine work activities, infrequent activities, and reasonably foreseeable emergencies such as spill response, rescue or escape situations;

    f. Make all reasonable efforts to provide fit testing, training, and medical evaluations during normal working hours;

    g. Provide a copy of 8CCR5144 Appendix D to all employees who are not required to use respiratory protection, but who choose to do so voluntarily. Also obtain employee signatures on the statement that the employee has read and understands Appendix D;

    h. Evaluate the program regularly to ensure that procedures are followed, respirator use is monitored, and respirators continue to provide adequate protection when job conditions change;

    i. Maintain records of the following according to the City's Records Retention Policy;

j. Fit testing (including completed Voluntary Respirator Use Information Sheets, Appendix D to section 5144); and

k. Monthly inspection record for emergency use respirators.

2. **Supervisors will:**

a. Monitor compliance with this plan by employees who have a potential for occupational exposure;

b. Ensure that new employees are properly trained;

c. Ensure that all employees using City provided respiratory protection attend annual training sessions; and

d. Ensure respiratory protection equipment is available in accessible locations, used by personnel when appropriate and stored properly when not in use.

3. **Employees who wear or may wear a respirator will:**

a. Actively participate in all training, medical evaluations, and annual fit testing;

b. Be responsible for inspecting the equipment prior to each use;

c. Perform user seal checks, both positive and negative pressure, each time the respirator is put on per 8CCR5144 or manufacturer's instructions (Attachment C);

d. Clean the respirator after each use;

e. Properly store the equipment;

f. Report all problems to his or her supervisor immediately; and

g. Read and understand Appendix D from 8CCR5144 on voluntary use and return a signed copy to his or her supervisor.

4. **Environmental Health and Safety (EH&S) will:**

a. Oversee the development and updating of the RCP;

b. Provide technical support for all departments who participate in this program;

c. Assist in the study of specific operations, facilities, and equipment to determine employee exposure to harmful dusts, fogs, fumes, mists, gases, smokes, sprays or vapors as needed;

d. Assist in respiratory equipment selection;

e. Support departments in their efforts to provide fit-testing to all employees using City-provided respiratory protection equipment, whether use is voluntary or required;

f. Provide training on the care and use of respiratory protection equipment;

g. Maintain the City's respirator log which lists which respirators and cartridge types are used by various City departments (Attachment B);

h. Facilitate the required medical evaluations through administration of the Medical Questionnaire as found in 8CCR5144 Appendix C (contact the Safety Office for a copy of the questionnaire);

i. Maintain records of medical evaluations, though not the medical evaluations themselves, which are maintained by the medical evaluator. Records of medical evaluations must be retained and made available in accordance with 8CCR3204 and the City's records retention policy; and

j. Maintain records of the written respiratory protection program according to the City's Records Retention policy.

SELECTION OF RESPIRATORS

1. **General Requirements**

a. The department head or designee, with the assistance of EH&S, will select and provide an appropriate respirator based on the respiratory hazard(s) the employee is exposed to in the workplace along with other user factors that affect respirator performance and reliability as described in 8CCR5144 (d). A variety of respirator models and sizes will be provided to ensure that the respirator is acceptable and correctly fits the user;

b. The respirator and all components used will be NIOSH-certified and used in compliance with the conditions of its certifications;

c. Respiratory hazards in the workplace will be identified and evaluated by the department head or designee. This evaluation will include, but is not limited to, a reasonable estimate of employee exposures to respiratory hazard(s) as well as identification of the known or suspected contaminant's chemical state and physical form. If these determinations cannot be made, then the atmosphere is to be considered immediately dangerous to life and health (IDLH).

2. **Selection of Respirators for IDLH Atmospheres**

a. All oxygen-deficient atmospheres will be considered IDLH;

b. The department will provide a full facepiece, pressure-demand, self-contained breathing apparatus (SCBA), certified by NIOSH for a minimum service life of thirty minutes, or a combination full facepiece, pressure-demand, supplied-air respirator (SAR) with auxiliary self-contained air supply for IDLH atmospheres;

c. Compressed breathing air must be of highest purity and meet at least the requirements for Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989;

d. Respirators provided only for escape from IDLH atmospheres will be NIOSH-certified for escape from the atmosphere in which they will be used.

3. **Selection of Respirators for Atmospheres that are not IDLH**

    a. The department will provide a respirator that is adequate to protect the health of the employee and ensure compliance with all other Cal-OSHA statutory and regulatory requirements, both under routine and reasonably foreseeable emergency situations;

    b. The respirator selected will be appropriate for the chemical state and physical form of the contaminant;

    c. For protection against gases and vapors, the department will provide an atmosphere-supplying respirator, or an air-purifying respirator, provided that the respirator is equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant(s). If there is no ESLI appropriate for conditions in the workplace, the department will implement a change schedule for canisters and cartridges that is based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life. The department will have standard operating procedures for the information and data relied upon and the basis for the canister and cartridge change schedule and the basis for reliance on the data;

    d. For protection against particulates, the department will provide:

        1. An atmosphere-supplying respirator;

        2. An air-purifying respirator equipped with a filter certified by NIOSH as a high efficiency particulate air (HEPA) filter;

        3. An air-purifying respirator equipped with a filter certified for particulates by NIOSH; or

        4. For contaminants consisting primarily of particles with mass median aerodynamic diameters (MMAD) of at least two (2) micrometers, an air-purifying respirator equipped with any filter certified by NIOSH will be provided.

MEDICAL EVALUATIONS

1. Prior to fit testing, prior to requiring the employee to use a respirator in the workplace, or prior to the voluntary use of City provided respiratory protection equipment, the department will arrange for a medical evaluation through the EH&S Office. The medical evaluation will be in accordance with the procedures outlined in 8CCR5144 to determine the employee's ability to use a respirator. The department may discontinue an employee's medical evaluations when the employee is no longer required to use a respirator.

2. After the initial medical evaluation, the EH&S Office will arrange for additional medical evaluations that comply with the requirements of 8CCR5144 if:

    a. An employee reports medical signs or symptoms that are related to ability to use a respirator;

    b. A physician or other licensed healthcare professional (PLHCP), supervisor, and/or the EH&S Office informs the department that an employee needs to be reevaluated;

    c. Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation; or

d. A change occurs in workplace conditions (e.g. physical work effort, protective clothing, or temperature) that may result in a substantial increase in the physiological burden placed on an employee.

FIT TESTING

1. The department will ensure that employees using a tight-fitting facepiece respirator pass an appropriate Cal- OSHA accepted qualitative fit test (QLFT) or quantitative fit test (QNFT) as outlined in Attachment D.

2. Fit testing will occur prior to use of the respirator, and annually, thereafter, and whenever a different respirator facepiece (size, style, model or make) is used, or whenever the employee reports, or a supervisor, PLHCP, or program administrator makes visual observations of changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight. Fit test results will be recorded using Attachment E or will be logged in the Portacount™ software.

PROCEDURES FOR PROPER USE

1. **Routine Situations**

   a. Employees will not be allowed to wear respirators with tight-fitting facepieces if they have facial hair (e.g. stubble, bangs), absence of normally worn dentures, facial deformities (e.g. scars, deep skin creases, prominent cheekbones), or other facial features that interfere with the facepiece seal or valve function. Jewelry or headgear that projects under the facepiece seal is also not allowed;

   b. If corrective glasses or other personal protective equipment are worn, they should not interfere with the seal of the facepiece to the face. Full facepiece respirators can be provided with corrective glasses since corrective lenses can be mounted inside a full facepiece respirator;

   c. Contact lenses can be worn with any type of respirator. While conditions requiring use of a respirator may be hazardous to both contact lens wearers and to people who do not, contact lens wearers should be aware that certain conditions may make it necessary to avoid wearing their contact lenses. In particular, the use of contact lenses is not recommended in dusty atmospheres while wearing a half-mask facepiece. Each situation should be investigated, and the employee should always inform his/her supervisor if contact lenses are in use. Situations in which to avoid the use of contacts may include:

      1. Exposure to chemical fumes and vapors;

      2. Areas where potential for chemical splash exists;

      3. Areas where particulate matter or dust is in the atmosphere;

      4. Exposure to extremes of infrared rays;

      5. Intense heat;

      6. Dry atmosphere;

7. Flying particles; and

8. Areas where caustic substances are handled, particularly those substances used or stored under pressure.

d. A seal check will be performed every time a tight-fitting respirator is donned (Attachment C).

2. **Infrequent Situations**

a. Each employee will leave the area where respirators are required for any of the following reasons:

1. To replace filters or cartridges;

2. When a smell or taste of a chemical is detected inside the respirator;

3. When a change in breathing resistance is noticed;

4. To adjust a respirator; or

5. To wash face or respirator.

3. **Emergency Situations**

a. Each employee will leave the area where respirators are required for any of the following reasons:

1. If the employee becomes ill; or

2. If the employee experiences dizziness, nausea, weakness, breathing difficulty, coughing, sneezing, vomiting, fever or chills.

4. **Potential IDLH Situations**

a. Departments where employees are exposed to potential IDLH situations will prepare department-specific procedures for routine, infrequent, and emergency situations involving the use of SCBA's and SAR's.

MAINTENANCE AND CARE OF RESPIRATORS

The department will provide for the cleaning and disinfecting, storage, inspection, and repair of respirators used by employees. Proper maintenance includes disassembling of all parts, discarding or repairing defective parts, washing components as per manufacturer's instructions, and reassembly, including installation of new parts as necessary. For most respirators, washing in warm water with mild detergent, rinsing in clean, warm, preferably running water, draining, air or hand drying with lint-free cloths, reassembling with new components as necessary and testing for proper function is sufficient.

IDENTIFICATION OF FILTERS, CARTRIDGES, AND CANISTERS

The department supervisor will ensure that all filters, cartridges and canisters used in the workplace are labeled and color-coded with the NIOSH approval label, and that the label is not removed and remains legible at all times.

TRAINING

1. Training for all employees using City provided respiratory protection, whether voluntary or required use, must be effective, comprehensive, and understandable;

2. The training must recur annually, and more often, if necessary;

3. The basic information on respirators in Appendix D must be provided to employees who wear respirators voluntarily when not required to do so by the City;

4. The department will ensure that each employee can demonstrate knowledge of at least the following:

    a. Why the respirator is necessary, including the nature of the respiratory hazards in the workplace;

    b. How improper fit, usage, or maintenance can compromise the protective effect of the respirator;

    c. The limitations and capabilities of the respirator;

    d. How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions;

    e. How to inspect, put on and remove (don and doff), use, and check the seals of the respirator;

    f. How to clean, repair and store the respirator;

    g. How to use a respirator in an emergency situation;

    h. What to do when a respirator fails; and

    i. How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators, and the general requirements of 8CCR5144.

VOLUNTARY USE

1. Before the voluntary use of City-provided respirators is approved by the department in accordance with this RPP, the employee will:

    a. Submit to a medical evaluation;

    b. Receive initial training in the proper use, care and limitations of the selected respirator;

    c. Review, sign, date and submit a copy of the "Information for Employees Using Respirators When Not Required Under the Standard" found in Appendix D to section 5144; and

d. Obtain a successful fit test for those types of respirators to be worn by that employee.

RECORDKEEPING

1. For the Written Program, the EH&S Office will update and maintain a current copy as needed to reflect those changes in workplace conditions that may affect respirator use. This RPP will be reviewed at least every three (3) years and the review will be documented;

2. For Fit Test Records, departments will retain fit test records until the next fit test is administered;

3. For Employee Training Records, departments will retain for the duration of employment plus three (3) years;

4. For Medical Evaluations, the medical provider will retain these records, including written recommendations, for the duration of employees' employment plus thirty years.

EVALUATION OF EFFECTIVENESS OF PROGRAM

1. Departments and/or EH&S staff will evaluate the effectiveness of the program by performing the following steps:

    a. Checking results of fit-tests and health care provider evaluations;

    b. Talking with employees who wear respirators about his or her respirator i.e. how the respirator fits, is the respirator providing protection, any odors while wearing respirator, etc.;

    c. Periodically checking employee job duties for changes in chemical exposure;

    d. Periodically checking maintenance and storage of respirators; and

    e. Periodically checking how employees use their respirators.

Definitions
Attachment A

Air-purifying Respirator
A respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

Assigned Protection Factor (APF)
The workplace level of respiratory protection that a respirator or class of respirators is expected to provide to employees when the employer implements a continuing, effective respiratory protection program as specified by 8CCR5144.

Atmosphere-supplying Respirator
A respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.

Canister or Cartridge
A container with a filter, sorbent, or catalyst, or combination of these items, which removes specific contaminants from the air passed through the container.

Demand Respirator
An atmosphere-supplying respirator that admits breathing air to the facepiece only when a negative pressure is created inside the facepiece 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 significant 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, for example, that the sorbent is approaching saturation or is no longer effective.

Escape-only Respirator
A respirator intended to be used only for emergency exit.

Filter or Air Purifying Element
A component used in respirators to remove solid or liquid aerosols from the inspired air.

Filtering Facepiece (dust mask)
A negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium.

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
The use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual. (See also Qualitative fit test QLFT and Quantitative fit test QNFT.)

Helmet
A rigid respiratory inlet covering that also provides head protection against impact and penetration.

High Efficiency Particulate Air (HEPA) Filter
A filter that is at least 99.97% efficient in removing monodisperse particles of 0.3 micrometers in diameter. The equivalent NIOSH 42 CFR 84 particulate filters are the N100, R100, and P100 filters.

Hood
A respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.

Immediately Dangerous to Life or Health (IDLH)
An atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.

Loose-fitting Facepiece
A respiratory inlet covering that is designed to form a partial seal with the face.

Maximum Use Concentration (MUC)
The maximum atmospheric concentration of a hazardous substance from which an employee can be expected to be protected when wearing a respirator, and is determined by the assigned protection factor of the respirator or class of respirators and the exposure limit of the hazardous substance. The MUC can be determined mathematically by multiplying the assigned protection factor specified for a respirator by the required Cal-OSHA permissible exposure limit, short-term exposure limit, or ceiling limit. When no Cal-OSHA exposure limit is available for a hazardous substance, an employer must determine an MUC on the basis of relevant available information and informed professional judgment.

Negative Pressure Respirator (tight fitting)
A respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.

Oxygen Deficient Atmosphere
An atmosphere with an oxygen content below 19.5% by volume.

Physician or Other Licensed Health Care Professional (PLHCP)
An individual who is legally permitted scope or practice (i.e. license, registration, or certification) allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the health care services required by § 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 facepiece when the positive pressure is reduced inside the facepiece by inhalation.

Qualitative Fit Test (QLFT)
A pass/fail fit test to assess the adequacy of respirator fit that relies on the individual's response to the test agent.

Quantitative Fit Test (QNFT)
An assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

Respiratory Inlet Covering
That 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 facepiece, 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 period of time that a respirator, filter or sorbent, or other respiratory equipment provides adequate protection to the wearer.

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 Facepiece
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.

City of Sacramento Respirator Log
(Attachment B)

Department	Division/ Section	Respirator Type	Filter Type	Purpose
CC&L	Golf	Disposable respirator	N95	Particulates/Disease transmission
CC&L	Golf	Disposable respirator	R95	Particulates/Disease transmission
CC&L	Old Sacramento	Disposable Respirator	N95	Particulates - Voluntary
CDD	Housing & Dangerous Buildings	½ face APR	Organic Vapor/ Multi-gas/ P100	Particulates/Disease transmission
DGS	Animal Care	½ face APR	Organic Vapor/ Multi-gas	Disease transmission
DGS	Animal Care	½ face APR Disposable with fixed cartridge	Organic Vapor/P100	Disease transmission
DGS	Body shop	½ face APR	P100	Particulates
DGS	Body shop	½ face APR Disposable with fixed cartridge	Organic Vapor/N95	Particulates
DGS	Carpenter Shop	½ face APR	P100	Particulates
DGS	Painters	½ face APR	P100	Paint exposure/ Particulates
DGS	Painters	½ face APR	N95	Paint exposure/ Particulates
DGS	Painters	½ face APR	Organic Vapor	Paint exposure
Fire		SCBA		Fire response Hazmat response
Fire		½ face APR	P100	Disease transmission
Fire		Disposable respirator	N95	Disease transmission

Department	Division/ Section	Respirator Type	Filter Type	Purpose
Fire		Disposable respirator	P100	EMS High Hazard Procedures & Asbestos Exposure
Fire		½ face APR	Organic Vapor/Acid Gases/P100	Wild land fires
Police Dept.		Full face APR	Police CN/CS filter For Law Enforcement	Civil unrest
Police Dept.		½ face APR	P100	Disease transmission
Police Dept.		Disposable respirator	N95	Disease transmission
Risk Management	EH&S	½ face APR	P100	Sampling
Risk Management	EH&S	Disposable respirator	N95	Sampling
Transportation	Urban Forestry	Disposable respirator	N95	Disease transmission
Utilities	Plant Services	Full face APR/SCBA	Cl	Chlorine response Cylinder change-out
Utilities	Plant Services	Disposable respirator	P100	Welding fume/ Grindings
Utilities	Plant Services	½ face APR	P100	Welding fume/ Grindings
Utilities	Plant Services	PAPR	P100	Welding fume/ Grindings
Utilities	Solid Waste	½ face APR	Organic Vapor	Paint exposure

Seal Check Procedures
(Attachment C)

Important Information for Employees:

1. A seal check is required each time a respirator is worn, prior to entering the respirator use area. The purpose of a seal check is to make sure the respirator (which has been previously fit tested) is properly positioned to prevent leakage during use and to detect functional problems.
2. The procedure below has two parts - a positive pressure check and a negative pressure check. Both checks must be completed each time the respirator is worn. The checks are simple and should only take a few seconds to perform.
3. If the respirator does not pass both seal checks it is not functioning properly and the employee should notify his/her supervisor for further instruction.

Positive Pressure Check:

Remove exhalation valve cover, if removable.

1. Cover the exhalation valve completely with a palm of a hand while exhaling gently to inflate the facepiece slightly.
2. The respirator facepiece should remain inflated (indicating a build-up of positive pressure and no outward leakage).
3. If no leakage is detected, replace the exhalation cover (if removed), and proceed to conduct the negative pressure check.
4. If leakage is detected, reposition the respirator (after removal and inspection), and try the positive pressure check again.

Negative Pressure Check

1. Completely cover the inhalation opening(s) on the cartridges or canister with palm(s) of hand(s) while inhaling gently to collapse the facepiece slightly. If palms of hands are ineffective, filter seals (if available) or thin rubber gloves may be used.
2. Once the facepiece is collapsed, do not exhale for ten seconds while keeping the inhalation openings covered.
3. The facepiece should remain slightly collapsed (indicating negative pressure and no inward leakage).
4. If no leakage is detected, the tightness of the facepiece is considered adequate, the procedure is completed, and the respirator may be worn.
5. If leakage is detected, reposition the respirator (after removal and inspection) and repeat both the positive and negative seal checks.
6. If it is not possible to obtain a leak-free fit, it is necessary to try other sizes and styles of respirators.

Synopsis of City Fit Testing Procedures (Attachment D)

QUALITATIVE FIT TESTS PROCEDURES

SOLUTION PREPARATION

1. Unscrew the solution well and squeeze bulb of the nebulizer marked #1 Sensitivity Test Solution from the top portion and pour one teaspoon of the sensitivity test solution into the solution well.

2. Unscrew the solution well and squeeze bulb of the nebulizer marked #2 Fit Test Solution from the top portion and pour one teaspoonful of the fit test solution into the solution well.

SENSITIVITY TEST: with Nebulizer #1

This qualitative test is done to ensure that the person being fit tested can detect the taste of the test solution at very low levels. The sensitivity is a very dilute version of the fit test solution. The subject should not consume anything orally for at least 15 minutes before the test.

1. Put hood on subject without wearing the respirator. Position hood with about six inches between subject's face and hood window.

2. Instruct subject to breathe through his or her mouth and notify you when he or she detects the bitter or sweet taste of the solution.

3. Remove vent plug and nozzle plug. Insert nebulizer through hole in window. Inject 10 squeezes or until the subject is able to taste compound, fully collapsing bulb on each squeeze.

4. Note the number of squeezes when the subject tastes the compound, since this number will be repeated during the actual fit test.

FIT TEST with Nebulizer #2

1. Have subject don (put on) respirator and perform user seal check.

2. Wear respirator in uncontaminated area for a few minutes to make sure it is comfortable. Put on and position hood.

3. Put Nebulizer #2 through hole in hood window. Inject aerosol using same number of squeezes noted during the sensitivity testing.

4. After aerosol is injected, ask subject to perform following exercises, each for 60 seconds:

    a. Normal Breathing (Standing upright);

    b. Deep Breathing;

    c. Turning head side to side, breathing at each shoulder;

d. Move head up and down;

e. Speak out loud the *Rainbow Passage*;

f. Bend at waist;

g. Normal breathing (while standing upright).

QUANTITATIVE FIT TESTS PROCEDURES

USING THE PORTACOUNT™ SYSTEM

1. The ambient aerosol condensation nuclei counter (CNC) quantitative fit testing (Portacount™) procedure quantitatively fit tests respirators with the use of a probe. The probed respirator is only used for quantitative fit tests. A probed respirator has a special sampling device installed on the respirator that allows the probe to sample the air from inside the mask. A probed respirator is required for each make, style, model, and size that the department uses and can be obtained from the respirator manufacturer or distributor.

2. Class-100, class-99, or P3 filters must be substituted for fit testing even if you use another type of cartridge in the workplace.

3. Minimum fit factor required: 100 for half masks, 500 for full facepiece masks.

4. Instruct the subject not to smoke for at least 30 minutes prior to fit testing.

5. Instruct the subject to don the respirator five minutes before the fit test starts. This purges the ambient particles trapped inside the respirator and permits the wearer to make certain the respirator is comfortable.

6. Connect the Portacount's™ data port to your computer. Follow instructions provided with Portacount FitPlus™ fit test software.

7. If not using the fit test software, proceed according to instructions in the Portacount™ manual for "Stand Alone" mode.

8. Instruct the test subject to perform the same exercises in the Qualitative Fit Testing Synopsis above.

9. After the test exercises, question the subject regarding the comfort of the respirator. If it has become unacceptable, another model of respirator should be tried.

10. The Portacount™ will automatically stop and calculate the overall fit factor for the entire set of exercises. The overall fit factor is what counts. The Portacount™ will provide a pass or fail message.

11. Upon receipt of a pass message, indicating the fit test was successful - record the test subject's name, overall fit factor, make, model, style, size of respirator used, and date tested.

Respirator Fit Record
(Attachment E)

Employee Information

Employee Name: _____ Employee eCAPS Number: _____

Department: _____ Supervisor: _____

Job Title: _____ Date of Fit Test: _____

Fit Test Information

Conditions observed at the time of fit test that could affect the respirator fit:

Glasses	Y/N
Facial Scar	Y/N
Clean Shaven	Y/N
1-2 Day Growth	Y/N
2+ Day Growth	Y/N
Mustache	Y/N
Does subject wear dentures?	Y/N
If yes, dentures present for fit test?	Y/N

Additional Notes:

_____

_____

Respirator Type (Make/Model/Size)	
Testing Method	
Positive Pressure Fit Check	_____Pass_____Fail
Negative Pressure Fit Check	_____Pass_____Fail
Normal Breathing	_____Pass_____Fail
Deep Breathing	_____Pass_____Fail
Head Turn Side to Side	_____Pass_____Fail
Head Moving Up and Down	_____Pass_____Fail
Talking (Rainbow Passage)	_____Pass_____Fail
Grimace	_____Pass_____Fail
Bending Over	_____Pass_____Fail
Normal Breathing	_____Pass_____Fail

Based on information provided on this form, I certify that the employee named on this form can wear the respiratory protective equipment listed above.

Name of Person Administering Test: _____ Date of Administration: _____

Signature of Person Administering Test: _____