

<i>HEALTH AND SAFETY MANUAL</i>	
Title: Respiratory Protection	
Approved by: Greg Savoy	Rev. 10/1/08

1 Purpose/Scope:

The purpose of this program is to establish a uniform procedure for the selection, use, care and training for employees assigned to work with respirators. Only NIOSH-certified respiratory equipment shall be provided to employees for use against harmful airborne contaminants, oxygen deficient atmospheres, when engineering measures are not feasible or during emergency situations.

This policy applies to all Company employees who are required to wear respiratory protection. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Company employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

2 Definitions/Responsibilities:

2.1 Definitions:

- 2.1.1 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.
- 2.1.2 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.
- 2.1.3 Canister or cartridge - means a container with a filter, sorbent, catalyst, or combination of these items, which removes specific contaminants from the air passed through the canister or cartridge.
- 2.1.4 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.
- 2.1.5 Employee exposure - an exposure to a concentration of an airborne contaminant that would occur if the employee were not using respiratory

- 2.1.6 Escape-only respirator - a respirator intended to be used only for emergency exit.
- 2.1.7 Fit test - the use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.
- 2.1.8 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.
- 2.1.9 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.
- 2.1.10 Oxygen deficient atmosphere – an atmosphere with oxygen content below 19.5% by volume.
- 2.1.11 Physician or other licensed health care professional (PLHCP) – an individual whose legally permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide, or be delegated the responsibility to provide health care services.
- 2.1.12 Positive pressure respirator – a respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.
- 2.1.13 Qualitative fit test (QLFT) – a pass/fail fit test to assess the adequacy of respirator fit that relies on the individual's response to a test agent.
- 2.1.14 Quantitative fit test (QNFT) – an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.
- 2.1.15 Self-Contained Breathing Apparatus - an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.
- 2.1.16 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.
- 2.1.17 User seal check - an action conducted by the respirator user to determine if the respirator is properly seated to the face.

2.2 Responsibilities:

- 2.2.1 Manager - accountable that the supervisor in charge has thoroughly familiarized all assigned personnel and contractors with the contents of this procedure.
- 2.2.2 Supervisor – ensures that personnel using respirators have been fit-tested and properly trained in this procedure. Supervision is also responsible to:
 - Ensure respirators are cleaned, repaired, inspected and stored in a clean place;

- Designate a competent person to perform monthly inspections on emergency respirators if any are located on company premises.

2.2.3 Employee – responsible for using the appropriate respirator in accordance with the instructions and training they have received, for inspecting the respirator prior to each use, cleaning and storing the respirator in accordance with this procedure.

3 Requirements:

3.1 Respiratory Program Administration:

3.1.1 Each Regional Manager, Shop Manager and Facilities Manager or his/her designee shall be the Program Administrator. The program administrator must be knowledgeable of the complexity of this plan, conduct evaluations, and be properly trained.

3.2 Fit-Testing and Selection:

3.2.1 Respirator fit tests shall be performed as needed, but no less than once a year for each type of respirator used by each employee including SARs and SCBA.

3.2.2 Negative pressure respirators, with tight fitting seals, require a qualitative fit test (QLFT) on the face to face-piece seal to ensure effectiveness. The qualitative fit test protocol included in this program as Exhibit R-1.3, or an equivalent that meets the requirements of this protocol must be used for negative pressure respirator fit testing.

3.2.3 SAR and SCBA type respirators require a quantitative fit test (QNFT) on the face to face-piece seal to ensure effectiveness. The quantitative fit test must be conducted by a third party provider. The protocol is very similar to the qualitative method, but uses a machine to accurately measure the fit. The provider shall follow their quantitative fit testing protocol when conducting fit testing for SAR and SCBA respirators.

3.2.4 All fit testing must include the following:

- Face-piece comfort, vision interference, weight of the device and ease of breathing shall be considered during fitting as well as the face-piece seal. Several models and/or brands may be tried to accommodate various facial features.

- ✓ Facial hair growth, glasses or anything that can affect the seal is prohibited.

- Employees who use respirators shall keep facial hair growth so that a face-piece-to-skin seal occurs (see Exhibit R-1.1 – Acceptable Facial Hair For Respirator Users Guide).
- Employees must check for a good seal each time the respirator is put on.

- 3.2.5 Managers are responsible for ensuring that records indicating the name of the employee, type of respirator fitted and the date of the fitting are available at each applicable office to ensure availability at all times.
- Respirator fitting tests are to be performed as needed, but no less than once a year for employees who routinely use respirators. Records of fittings for each user will be kept on the Fit Test form (EHS17-1) or a third party provider's form may be substituted.
 - A qualified contractor or respiratory equipment supplier can be used to fit test employees.
 - The fit test protocol used by a third party must, at a minimum, meet the requirements of the Company's fit testing protocol.

3.3 Respirator Selection:

- 3.3.1 A Job Respiratory Hazard Assessment (see Exhibit R-1.2) shall be completed by each location's management team to determine which jobs require respiratory equipment and estimate exposures and contamination information. A copy of this assessment shall be kept in the respiratory protection program file at the applicable office.
- 3.3.2 Only NIOSH approved respirators will be provided and used at Company facilities. The Company provides and pays for these respirators. Employees are not permitted to furnish their own respirators.
- Contractors performing work for The Company are required to provide their own respirators.
- 3.3.3 The proper type of respirator is based on the following:
- The nature of the operation or process.
 - The type of respiratory hazard.
 - The size of the area where the respirator is required in relation to the nearest area of breathable air.
 - The length of time the respirator is required.
 - Activities of other employees in the hazardous area.
 - The physical and functional characteristics of the respirator.
- 3.3.4 ALL cylinders shall meet DOT requirements and breathing air fittings must be incompatible with non-respirable gases and containers.
- 3.3.5 Pure oxygen must never be used in compressed air units. The proper grade of air is Grade D or better.
- 3.3.6 Respirator types:
- The following respirators are used in Company operations:
 - ✓ Positive Pressure SCBA and SAR
 - Scott Model 2.2; Model 2.2 Ska-Pak (SAR)
 - North Model 800; Model 85400 (SAR)
 - MSA Model 401
 - Draeger Model PA80
 - ✓ ½ Face air purifying respirators
 - 3M Model 6000 Series

- ✓ Full face air purifying respirators
 - 3M Model 6000 Series
- ✓ Nuisance dust and vapor masks
 - 3M Model 8210, N95
 - 3M Model 8512, N95
 - Moldex Model 2800, N95

3.4 Maintenance and Care of Respirators:

3.4.1 Respirators used routinely shall be inspected by the user before each use and during cleaning for wear and general condition.

- Supervisors shall inspect or designate an employee to inspect respirators for use in emergency situations monthly to ensure they are in good condition. Emergency use respirators shall be clearly marked and stored in easily accessible locations.
- Escape-only respirators shall be inspected prior to being carried into the workplace.

3.4.2 Deterioration of rubber inhalation valves:

- Rubber inhalation valves will be replaced if they do not assume their original shape after being rolled between the thumb and forefinger and dropped on a table or flat surface.

3.4.3 Cleaning and Sanitizing:

- To ensure proper protection to the user, all respirators will be cleaned and sanitized after each use. The user is responsible for cleaning their respirator. All users will be trained on the cleaning and sanitizing procedure. The following steps will be followed:
 - ✓ Remove the filter, cartridge or canister and all gaskets not attached to seats.
 - ✓ Visually inspect face-piece, headbands and other parts. Discard faulty items.
 - ✓ Remove elastic headbands. Do not wash headbands in sanitizing solution.
 - ✓ Remove exhalation valve cover.
 - ✓ Remove inhalation valves.
 - ✓ Wash face-piece in cleaner/disinfectant or detergent solution using a soft bristle brush to remove dirt.
 - ✓ Rinse completely clean, warm water.
 - ✓ Hand dry masks, then air dry in a clean area.
 - ✓ Clean other respirator parts according to instructions from the manufacturer.
 - ✓ Inspect the respirator valves, head-straps, canisters and filters. If defective, replace questionable parts with new parts.
 - ✓ After drying, place the respirator in a clean, sealable plastic bag or container for storage.
 - ✓ Reassemble respirator and visually check.

- ✓ Install new or retested filters, cartridges or canisters.
- ✓ Seal each respirator individually in a sealable plastic bag or container.

3.5 Repair of Respirators:

3.5.1 Repair of respirators or replacement of parts will be performed only by experienced persons using parts approved by the manufacturer. No attempt shall be made to fit odd sized, non-fitting parts or make repairs beyond the manufacturer's recommendations.

3.6 Storage of Respirators:

3.6.1 Respirators will be stored after inspection, cleaning or repair. The containers, whether they are sealable plastic bags or containers, shall protect the respirator from dust, sunlight, extreme heat and cold, excessive moisture and damaging chemicals. The units will not be subjected to temperatures above 120°F or rough handling. In storage, the face-piece and exhalation valve should rest in a normal position so that the elastomer setting will not impair the function of the unit.

3.7 Respirators Contaminated with Toxic Materials:

3.7.1 The respirator user shall be familiar with the hazards of the materials being used. These hazards, and general protective measures, are found on the Material Safety Data Sheets (MSDS) for the materials. If the respirator should become contaminated with toxic materials, the following procedure will apply:

- If contamination is light, clean and sanitize the respirator using the above cleaning procedures.
- If contamination is heavy, or if there is doubt as to the degree of contamination, the supervisor should be notified. If the supervisor determines that normal cleaning will not provide adequate decontamination, the respirator will be discarded according to the disposal instructions on the MSDS of the material.

3.8 Medical Evaluation:

3.8.1 Prior to fit testing or use of the respirator, a medical professional (doctor or PLHCP) will certify whether an employee is permitted to use a respirator based on the description of the job or tasks to be performed.

3.8.2 The medical professional shall perform a medical evaluation based on a medical history questionnaire (provided by clinic) from the employee and the results of any tests that the medical professional deems necessary. The medical evaluation shall be confidential, performed during working hours, convenient, understandable, and each employee shall be allowed to discuss results with the medical professional or PLHCP. The medical professional shall make one of the following status determinations:

- No restriction on respirator use.
- Some specific use restrictions.
- Cannot use respirators under any circumstances.

3.9 Supplemental Information:

3.9.1 Employees shall be allowed access to review this OSHA standard 29 CFR 1910.134.

3.9.2 Employees shall be permitted to review the Company Respiratory Program.

3.9.3 Medical examinations, respirators and training shall be provided to employees at no cost.

3.10 Training:

3.10.1 Training, medical examinations and respirators shall be provided at no cost to the employee.

3.10.2 All employees who are required to use respiratory equipment in the performance of their jobs will be trained annually on the following:

- Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator;
- What the limitations and capabilities of the respirator are;
- How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions;
- How to inspect, put on and remove, use, and check the seals of the respirator;
- What the procedures are for maintenance and storage of the respirator;
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators; and
- The general requirements of the Company Respiratory Program.

3.10.3 The training shall be conducted in a manner that is understandable to the employee.

3.10.4 The Company shall provide training prior to requiring employees to use a respirator in the workplace.

3.10.5 Retraining shall be administered annually and when the following situations occur:

- Changes in the workplace or the type of respirator render previous training obsolete;
- Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill;
- Any other situation arises in which retraining appears necessary to ensure safe respirator use.

3.11 Immediately Dangerous to Life & Health (IDLH) Atmospheres:

3.11.1 Only positive pressure SCBA (self-contained breathing apparatus) or positive pressure air line respirators with a full emergency egress bottle shall be used when an employee is exposed to hydrogen sulfide (H₂S),

oxygen deficient or enriched atmospheres, or atmospheres immediately dangerous to life and health.

3.11.2 When work is to be performed in a potential IDLH atmosphere:

- An outside standby person or persons must be posted for surveillance in the event a rescue becomes necessary;
- The standby person shall maintain communication with the worker(s) and the rescue team;
- The standby person shall understand the notification procedures and necessary actions to be taken for the facility where work is performed;
- The standby person shall be properly trained and provided appropriate equipment to perform his/her duties.
- Air-purifying respirators may **not** be used for H₂S or oxygen deficient atmospheres.
- SCBA and air line respirators shall contain a minimum of Grade D breathing air.

3.12 Program Effectiveness & Evaluation:

3.12.1 To evaluate the Company Respiratory Program's effectiveness:

- Supervisors shall survey employees to ensure that respirators are properly cleaned and maintained;
- Supervisors shall ensure employees leave the work area to wash, change cartridges as per the manufacturers' recommendation, if they detect resistance while wearing the respirator or if the respirator should become damaged.

3.12.2 Supervisors shall periodically interview employees about:

- How the respirator fits;
- Respirator selection;
- Their use of the respirator; and
- How the employee maintains his/her respirator.

3.13 Record Keeping:

3.13.1 Operations managers are responsible for ensuring that records are accurate and available at each applicable office to ensure availability at all times.

3.13.2 Records can be retained either electronically on a computer system or as a hard copy.

- The key to any record is the ability to "pull it" in a reasonable time frame to verify that an inspection or training obligation has been completed.

3.13.3 Respiratory record forms include:

- Qualitative Fit Test Certification (see Exhibit R-1.4).
- Respirator for Emergency Inspection Record (see Exhibit R-1.5).

4 References:

4.1 29 CFR 1910.134.

4.2 American National Standards Institute: ANSI Z88.2.

5 Exhibits:

R-1.1 Acceptable Facial Hair for Respirator Users Guide.

R-1.2 Job Respirator Hazard Assessment.

R-1.3 Qualitative Fit Test Protocol.

R-1.4 Respirator Fit Test Certification.

R-1.5 Respirator for Emergency Use Inspection Record.

R-1.6 Steps for Developing a Respiratory Protection Program.

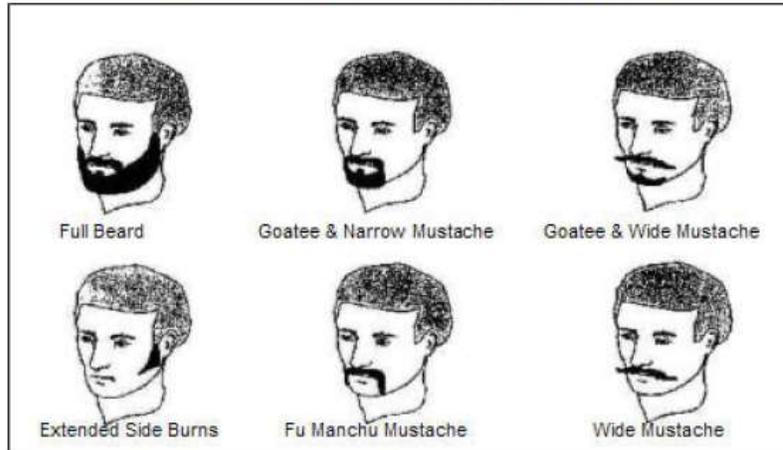
Exhibit R-1.1

Unacceptable/Acceptable Facial Hair Guide Lines

UNACCEPTABLE FACIAL HAIR



The shaded portions are your respirator seal areas.
Facial hair is NOT PERMITTED on these portions of the face.



ACCEPTABLE FACIAL HAIR



Clean Shaven



Narrow Mustache

Exhibit R-1.2

Job Respiratory Hazard Assessment

Job or Procedure:	Hazardous Substance(s) 1:	Required Respiratory Protection Equipment:	Required Use Routine-2 Emergency-3	Remarks:

- 1 Examples: Oxygen deficiency, H2S, asbestos dust, NORM, large scale spray painting jobs, etc.
- 2 Respiratory protection must be worn throughout the operation to prevent possible overexposure to hazardous contaminant.
- 3 Respiratory protection must be on site ready for immediate use in case of accidental release of hazardous material.

Installation (regional office, field office, etc.) Signature

Exhibit R-1.3

Qualitative Fit Test Protocols

General Information:

Full face and half face negative pressure air purifying respirators do not require modification.

The following protocols must be followed for the test medium selected to ensure a proper respirator to face seal is achieved. The following test elements are required to be performed:

- Provide a sufficient number of respirator models and sizes.
- Demonstrate donning and adjustment of the respirator.
- Conduct a 5-minute comfort assessment.
- Wear any additional personal protective equipment (PPE) that could potentially affect the seal of the respirator, e.g. glasses, helmet.
- Perform the user seal check.

What is a user seal check? It is a positive and negative pressure check performed by the wearer to determine if the respirator is properly sealed to the face.

After the elements listed above have been successfully performed, then a qualitative fit test can be administered.

There are specific test exercises required for qualitative fit testing procedures and these are presented in the order of performance:

- Normal breathing
- Deep breathing
- Turning head side to side
- Moving head up and down
- Talking, i.e. rainbow passage
- Bending over or jogging in place
- Normal breathing

With qualitative fit testing, there is a choice of test agents:

- Saccharin, which is a sweet taste test which can use any type of respirator filter;
- Bitrex, which is a bitter taste test which can use any type of respirator filter;
- Irritant smoke, which is an odor test that needs respirator filters designated N, R, or P 100s or a HEPA cartridge.

Saccharin and Bitrex require a test chamber or hood in which to conduct the testing and a smell or taste test to determine whether the wearer can detect the test agent. Irritant smoke must never be used in a test chamber or hood. If the respirator leaks excessively, the subject could be injured if he/she is not able to immediately exit the test aerosol.

Qualitative Respirator Fit Test Procedures:

Specific procedures for taste and odor based fit testing follow:

A. Saccharine or Bitrex - Fit Test Procedure:

- Taste threshold screening.
 - ✓ Performed without wearing a respirator.
 - ✓ Have employee put fit test hood on.
 - ✓ Have employee breathe through mouth with tongue extended.
 - ✓ Spray threshold check solution into the hood - ten rapid squeezes, fully pressing on bulb and letting it completely expand.
 - ✓ If employee tastes the check solution, record number of squeezes (ten no matter how many actually squeezed).
 - ✓ If employee does not taste the check solution, add ten more squeezes of check solution.
 - ✓ If employee now tastes the check solution, record number of squeezes (twenty no matter how many actually squeezed). Have employee remember the taste for reference during the fit test.
 - ✓ Continue until reaching 30 squeezes, if employee cannot taste the check solution, they have no sensitivity to it, therefore cannot be fit tested with it, dismiss the employee until they can be fit tested with different testing medium.
- Show employee the proper way to don a respirator, proper positioning, strap tension, and determining if there is an acceptable fit.
- Let employee select the respirator they want from a variety of models and sizes.
 - ✓ Tell employee they are being allowed to select their own respirator in order to get a good and comfortable fit.
 - ✓ Tell employee to place different masks of different sizes to their face in order to find a mask that has a good fit.
- Have employee put on the chosen mask and wear for 5 minutes in order to assess comfort.
 - ✓ When assessing comfort, ask about:
 - Position on the nose.
 - Room for eye protection (have them put on eye protection).
 - Room to talk.
 - Position on face and cheeks.
- Determine adequacy of respirator fit by checking:
 - ✓ Chin placement.
 - ✓ Strap tension
 - ✓ Fit across nose bridge.
 - ✓ Size of mask - goes from nose to chin.
 - ✓ Look in mirror for self-observation.

- ❑ Have employee move head up and down and side to side while taking slow deep breaths in order to seat the mask on face. Employee conducts user seal check.
 - ✓ Positive pressure check.
 - Close off the exhalation valve.
 - Exhale gently into face piece.
 - ✓ Negative pressure check.
 - Close off inlet opening of canister or cartridge by covering with palm of hand, or by replacing the filter seals.
 - Inhale gently until face piece collapses slightly.
 - ✓ Aerosol fit test:
 - Ensure employee has not eaten, drank, chewed gum, or smoked for at least 15 minutes before the test.
 - Have employee don respirator and hood.
 - Have employee breathe through mouth with tongue extended.
 - Inform employee to notify you if the taste of test solution is detected.
 - Squeeze test solution into hood using same number of squeezes necessary during taste threshold screening.
 - Have employee perform the following exercises:
 - Normal breathing - 1 minute.
 - Deep breathing - 1 minute (slow deep breaths in order not to hyperventilate).
 - Turn head from side to side - inhale at each side - 1 minute.
 - Move head up and down - inhale in the up position - 1 minute.
 - Talk - Read prepared text, count backward from 100, recite a memorized poem or the Rainbow Passage, below:

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.

- Bend over - at waist, pretend touching toes, or jogging in place - 1 minute.
 - Normal breathing - 1 minute.
- ❑ Replenish aerosol every 30 seconds with half the number of squeezes necessary during the threshold screening (5, 10, 15).
- ❑ If employee does not report the taste of the test solution, the test is passed.
- ❑ If the taste of the test solution is detected, the test is failed and the employee must start over (threshold screening AND fit testing) with a new respirator.

- B. Irritant Smoke - Fit-Testing Procedure:
- This test will be conducted in an area with good ventilation. No test enclosure or hood is to be used.
 - Stannic chloride tubes and a squeeze bulb will be used for this test. After breaking off both ends of the tube, place one end in the squeeze bulb and cover the other end with a short piece of tubing to prevent injury from the jagged edge of the tube.
- C. Sensitivity screening:
- Performed without wearing a respirator. This should be done with the same tube used for fit testing.
 - Instruct employee to keep eyes closed.
 - Blow a very small amount of smoke in the direction of the employee to determine if they can detect it.
 - If they cannot, another form of fit-test must be performed.
 - If they can detect it, proceed with fit-test.
- D. Show employee the proper way to don a respirator, proper positioning, strap tension, and determining if there is an acceptable fit.
- E. Let employee select the respirator they want from a variety of models and sizes.
- Tell employee they are being allowed to select their own respirator in order to get a good and comfortable fit.
 - Tell employee to place different masks of different sizes to their face in order to find a mask that has a good fit.
- F. Have employee put on the chosen mask and wear for 5 minutes in order to assess comfort.
- When assessing comfort, ask about:
 - Position on the nose.
 - Room for eye protection (have them put on eye protection).
 - Room to talk.
 - Position on face and cheeks.
- G. Determine adequacy of respirator fit by checking:
- Chin placement.
 - Strap tension
 - Fit across nose bridge.
 - Size of mask - goes from nose to chin.
 - Look in mirror for self-observation.
 - Have employee move head up and down and side to side while taking slow deep breaths in order to seat the mask on face. Employee conducts user seal check.
- H. Positive pressure check:
- Close off the exhalation valve.
 - Exhale gently into face piece.
- I. Negative pressure check.
- Close off inlet opening of canister or cartridge by covering with palm of hand, or by replacing the filter seals.
 - Inhale gently until face piece collapses slightly.
- J. Irritant smoke fit test:
- Instruct employee to keep their eyes closed during the test.
 - Have employee don respirator.
 - Have employee breathe through mouth.
 - Inform employee to notify you if the irritant smoke is detected.
 - Blow irritant smoke around the respirator, at least 12 inches from the face. If the employee detects the smoke, stop the test and re-fit the respirator.

- If the employee does not detect the smoke, proceed with the fit-test exercises.
- The smoke shall be directed around the mask at a distance of 6 inches.
- Have employee perform the following exercises:
 - Normal breathing - 1 minute.
 - Deep breathing - 1 minute (slow deep breaths in order not to hyperventilate).
 - Turn head from side to side - inhale at each side - 1 minute.
 - Move head up and down - inhale in the up position - 1 minute.
 - Talk - Read prepared text, count backward from 100, recite a memorized poem or the Rainbow Passage, below:

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.

- Bend over - at waist, pretend touching toes, or jogging in place – 1 minute.
- Normal breathing - 1 minute.
- If the employee detects smoke during the test, stop immediately and have them adjust their respirator in another area, begin the test again.
- If the employee does not detect smoke during the fit-test, have them remove their respirator in a smoke-free area and conduct another sensitivity test with the same smoke tube.
- If they detect the smoke during the sensitivity test, they have passed the fit-test.
- If they do not detect smoke during the sensitivity test, they have failed.

Exhibit R-1.6

STEPS FOR DEVELOPING A RESPIRATORY PROTECTION PROGRAM

Step 1 Hazard Assessment:

Conduct a Job Respiratory Hazard Assessment (see Exhibit R-1.2) for your entire Regional Operations to determine risk areas.

Step 2 Respirator Selection:

Select the proper NIOSH-approved respirator for each area on the basis of the Job Respiratory Hazard Assessment.

Step 3 Medical Evaluation:

Identify and develop a specific list of employees that have a potential need to wear respiratory protection because of entering a toxic environment or who might be required to wear a respirator in an emergency. Following are a few examples:

- Hydrogen Sulfide (H₂S) – 10 ppm or greater
- Spray painting operations
- Sand-blasting operations
- Galvanized metal welding operations

Contact a physician or PLHCP with a local Occupational Medical Clinic. A medical questionnaire (provided by clinic) and the examination must be administered confidentially by the physician or PLHCP during the employee's normal working hours or at a time and place convenient to the employee. The physician or PLHCP will then submit a written recommendation regarding the worker's ability to use respiratory equipment.

Step 4 Fit Test:

Fit testing is required before the worker first wears a negative or positive pressure tight-fitting face-piece. Employee must be fit tested with the same make, model, style and size of the respirator that will be used. Irritant smoke will be the preferred method of effectiveness test. The QUALITATIVE FIT TEST form (see Exhibit R-1.4) must be completed and retained in the field office files. ***Fit test must be performed annually.***

Step 5 Training:

Employees required to wear a respirator to perform job duties must have training in respirators before use. Training must be re-performed when:

- There are changes in the workplace,
- There is a change in the type of respirator used,
- Inadequacies in the worker's knowledge are detected or,
- Other situations arise to ensure safe operation. Records of training must be kept in the Regional Office.

Training must be performed on an annual basis.

Step 6 Care, Maintenance & Storage:

Respirator inspection by the user is required before each use for wear and general condition. All respirators must be properly stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture and disintegrating chemicals.

Step 7 Program Evaluation:

The Respiratory Program, according to OSHA, must be evaluated at least annually. Revise the written SOPs, program administration, etc., based on the evaluation.