

Generic Written Respiratory Protection Program

Respiratory Protection Program

Mine Name: _____ Mine I.D.# _____

1. Written Procedures

- a. **Hazard Identification & Respirator Selection** – Air purifying respirators are designed to protect persons from breathing specific airborne contaminants and often provide little or no protection against other contaminants. Table RPP1 lists for each hazard, the respirators this company will use, their limitations, and job duties/areas of use.
- b. **Program Administrator** -- Respiratory protection programs will be administered by _____, who has sufficient knowledge of the subject to properly supervise the program.

2. Employee training

Training time, min ____ to ____

Teaching Method _____

Training Materials _____

Evaluation Method _____

Training will be done by _____

Training will cover all affected employees and supervisors. Training will be conducted before the worker begins work in the area where the respirator is needed. Training will include:

1. Engineering and administrative controls, order of priority of controls, proper use and maintenance of these controls
2. Reason respirators are required -- explanation of the hazard and its effects (i.e. acute or chronic)
3. Selection of a respirator -- fit, comfort, one you can breath through.
4. Health conditions that interfere with respirator use
5. How long can you wear a respiratory device, how to detect breakthrough, excessive resistance to flow etc.
6. Types of respirators and limitations of each including N,R, and P and 95, 99 and 100.
7. Respirators used at particular site and proper procedures for mounting, care and maintenance of each
8. Proper fit
 - a. No facial hair
 - b. Medical conditions affecting skin texture
 - c. Self-fit test
 - d. Professional fit tests
9. Inspection, cleaning/disinfecting and storage – including reusables and throw-aways.

3. Fit-testing

1. All persons required to use a respirator will be fit tested first
2. Annual fit testing to be conducted on (date)_____ by (person/organization conducting test)_____
3. The test will be conducted by subjecting each person, while wearing the appropriate respirator, to the following fit test procedure:

___ Qualitative Fit Test by one of the following methods:

- a. Stannic Chloride Smoke_____
- b. Bitrex _____
- c. Saccharin_____

___ Quantitative Fit Test - the fit is acceptable if the person, while wearing a fitted respirator which has been outfitted with a sample port, is subjected to a test atmosphere (usually mineral oil mist) and the concentration of test atmosphere inside the respirator is negligible.

4. The person will perform exercises while wearing the respirator in the test atmosphere to determine if the respirator fits. Exercises will simulate at least the work of lifting, bending over, talking, movement of the head in all directions and exhibiting various facial expressions.
5. A written record form of the following will be maintained for these employees. (See copy of record form at end of this RPP):
 - a. Name of employee tested;
 - b. Date of testing;
 - c. Respirator manufacturer, model, style, and size worn;
 - d. Fit-test protocol and the name of the person administering the test;
 - e. Fit-test results.
6. If during respiratory fit testing, the employee experiences difficulty breathing through the respirator(s), the employee will be evaluated by a physician to determine his/her medical suitability for wearing a respirator.

4. Respirator cleaning and disinfecting

Users will be trained:

1. To inspect respirators prior to each use to determine that they are functioning properly
2. To clean and disinfect or replace the respirator on a regular basis according to manufacturer's recommendations, or after each use if they are used by more than one person. Adequate cleaning and disinfecting facilities will be provided at the following convenient location _____
3. To store respirators in the following convenient, clean and sanitary location _____
4. For reusable respirators (person) _____ will be trained to be knowledgeable in the respirator manufacturer recommendations for the use, care and maintenance of each model of respirator provided by the Company
5. Employees will be instructed as to where and how to obtain new disposable respirators or respirator cartridges when theirs become unusable, unsanitary, or exhibit excessive breathing resistance or breakthrough. These respirators will be available at the following locations:

5. Records of actions taken

(See fit testing/training record form at end of this RPP)

1. Records of fit-test which identify:
 - a. The exact model and size respirator
 - b. Date of testing
 - c. The fit-test method and
 - d. Whether the person passed or failed the test.
2. Records of training provided which include at least:
 - a. Identification of persons
 - b. Date of training and
 - c. Topics covered.

6. A statement of use

1. Assigned respirators will be worn by persons at all times while in the normal work areas where persons may be overexposed; These areas will be posted “Respirator Required” and
2. Work area(s) affected will be periodically checked to ensure that employees are using respirators and to check dust controls, employee exposure, and employee stress due to breathing resistance or heat. The area supervisor will include this check on his/her daily walk-around inspection.

Procedures to be used for Qualitative Dust Respirator Fit Testing

RPP Training

1. Controls and their order of priority -- examples of engineering and administrative controls
2. Reasons respirators are required for the persons being trained
 - a. Protect health from what?
 - b. Remove what from breathing zone?
 - c. Acute or chronic effect?
 - d. PPE is considered by MSHA to be for temporary use until feasible controls are installed.
3. Selection
 - a. Use only the correct respirator for the contaminant of concern.
 - b. Make sure the respirator you select is comfortable -- If not, let your supervisor know – you may need to select a different type
 - c. Make sure you don't need to strain to breathe with the respirator on
 - (1) If you do, ask your supervisor to schedule a medical examination
 - (2) If medical examination shows you can't wear a respirator, you may need to transfer to a different job
4. Health conditions that interfere with respirator use.
 - a. Heart condition
 - b. Asthma or other breathing condition
 - c. Claustrophobia
 - d. Contact lenses
 - e. Eye glass temples
 - f. Missing teeth
 - g. Skullcaps
 - h. Other
5. How long can you wear a respirator
 - a. Contaminant break through
 - b. High breathing resistance
6. Types of respirators
 - a. Filtering (air purifying) and air supply
 - b. Types of filtering respirators
 - c. Types of particulate respirators and classes
 - (1) N, R, and P and 95, 99, and 100.
 - (2) Other toxins
 - (3) Problems caused when the wrong type is used
7. Types used at this site and proper procedures for putting them on -- Read instructions for and demonstrate each type used

8. Proper fit
 - a. How to get a good fit?
 - (1) Remove all facial hair; cooperate fully during fit testing.
 - (2) How to self fit-test the respirator each time it is put on
 - (a) Breathe out with exhaust valve sealed by hand – should feel respirator lift from face
 - (b) Breathe in with inhalation valve sealed – respirator should cling with no leaks
9. How to inspect respirator and how to clean reusable type, how to store respirator.

SACCHARIN/BITREX FIT TESTS

Items Needed for Test

1. Selection of respirators to be available at site (the selection should include enough of each type so that each person tested can try one of each and obtain one).
2. Filter cartridges to use when fitting non-dust respirators.
3. Saccharin (or Bitrex) fit test kit including:
 - a. Dilute test solution (to test the person's sensitivity) and concentrated test solution (for fit testing)
 - b. Test Hood and collar
 - c. Dispensers (nebulizers) for dilute and concentrated solutions and spare parts
 - d. Forms to be used as records that people have been fit tested (copy form at end of this section)
 - (1) Date
 - (2) Fit person's name
 - (3) Type of respirator person is qualified to use (model and serial no)
 - (4) Type of test used
 - (5) Statement **“By my signature, I verify that I did not detect [*the sweet taste of saccharin*] [*the bitter taste of Bitrex*] during any of the actions required in fit testing me. However, I did taste the test substance during the sensitivity test”**
 - (6) Fit person's signature
 - (7) Tester's name
 - (8) Tester's signature

Room Set up for Qualitative Fit Testing

1. Set up Work Table for materials in fit test area, and a work table in another room or at least 20 feet away for the sensitivity test
2. Set up hood assemblies
3. Pour about one teaspoonful of weak solution (#1) into nebulizer labeled #1
4. Pour about one teaspoonful of strong solution (#2) into nebulizer labeled #2
5. Set up all the different types of respirators that Company wants to fit test and supply each with a dust filter for fit testing using saccharin or Bitrex
6. Mirror(s) for fitting respirator.

Conducting Test

1. Bring in subjects ahead of time, show them how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit
2. Tell them how to select a respirator – hold each chosen facepiece up to the face and eliminate those that obviously do not give an acceptable fit
3. Review the following comfort and fit criteria with each person:
 - a. Position of mask on the nose
 - b. Room for eye protection
 - c. Room to talk.
 - d. Position of mask on face and cheeks
 - e. Chin properly placed

- f. Adequate strap tension, but not too much.
 - g. Fit across nose bridge
 - h. Respirator of proper size for distance from nose to chin
 - i. Tendency of respirator to slip
 - j. Self-observation in mirror
4. Instruct subject on how to conduct self-fit test and have him/her conduct one; also that if it works proceed with the fit test, otherwise the subject may need to select another respirator
 5. Allow subjects to select respirators from a sufficient number of models and sizes and to self-fit test those selected
 6. Read the material on the following page.

SACCHARIN/BITREX FIT TESTS (continued)

Preliminary remarks for test

Saccharin only -- If you've used sweetener in the past hour, postpone taking this test until later. This includes chewing gum, candy, drinking pop, drinking coffee with sweetener etc.

Bitrex & Saccharin -- Please tell me if you suspect you're unable to taste a weak solution. If you're unable, the test we're using won't work and we'll need to use another test.

Correct respirator fit is serious business. Wearing an improperly- fitting respirator is false security, which makes you think you can go into dusty or other areas without serious consequences.

Dust respirators are for dust only. A dust respirator will not filter out toxic gases. Make sure you're using the correct respirator.

Persons with facial hair can't be fit with a respirator, and can't legally work in areas where a respirator is required. A caring supervisor is obliged to send you home if you're not clean shaven and need to work in an area requiring a respirator. Repeat court cases have upheld management's rights to require persons working in respirator-use areas to be clean-shaven or sent home.

How we plan to fit test you

1. You'll first select a comfortably-fitting respirator by holding it up against your face as it would be when in actual use. This is the respirator you're legally authorized to use from now on if the remaining steps in the selection procedure are successful.
2. You'll put the respirator on and properly adjust the straps. Note that if you must wear safety glasses or other head-mounted safety equipment in your work area, you must wear this equipment during these tests.
3. You'll wear the respirator for at least 5 minutes to determine if it's comfortable. You'll need to talk, walk, turn your head from side to side and up and down and make other movements that are similar to movements you make during your work in the respirator area of your workplace.
4. You're then ready to be fit tested.

SACCHARIN/BITREX FIT TESTS (continued)

5. You'll put the hood over your head and I'll blow the test mist into one of the openings in the front of the hood. I'll blow in more test mist every 30 seconds while you're performing the following movements for 60 seconds each. During the entire test, you'll breathe through your mouth so you are able to taste any test solution that gets past the respirator.
 - a. Normal breathing
 - b. Deep breathing (if you feel faint, ease up).
 - c. Turning head from side to side and inhaling in each position.
 - d. Nodding head up and down and inhaling in the up position.
 - e. Counting or reading the rainbow passage.
 - f. Grimacing while breathing.
6. If during any of the above exercises you taste the test mist, the respirator doesn't fit and will not provide complete protection. You'll need to select another respirator and start over.
7. Finally, after you've removed the hood, you'll go to the other end of the room and while you're breathing through your mouth, I'll blow a very weak solution of test mist toward your mouth using 10 squeezes of dispenser bulb. If you taste the test mist now, but did not taste it with the respirator on, you're properly fit.

For your health's sake, please be honest – if you taste the test mist at any time while wearing the respirator, stop me immediately and select a different respirator to start the test over with.

STANNIC CHLORIDE SMOKE FIT TESTS

Items Needed for Test

1. Selection of respirators to be available at site
2. Filter cartridges to use when fitting non-dust respirators
3. Fit test kit including:
 - a. Stannic Chloride Smoke Tubes, Squeeze Bulb and Tubing
 - b. Forms to be used as records that people have been fit tested (copy form at the end of this writeup)
 - (1) Date
 - (2) Fit person's name
 - (3) Type of respirator person is qualified to use (model and serial no)
 - (4) Type of test used
 - (5) Tester's name
 - (6) Tester's signature

Room Set up for Qualitative Fit Testing

1. Set up Work Table for materials in fit test area, and a work table in another room or at least 20 feet away for the sensitivity test
2. Adequate ventilation to remove smoke
3. A suitable number of respirators of each type so that each person to be tested can try out each type and select one that is suitable. For disposable respirators, provide a suitable number dust filtering cartridges for the test. These must be either HEPA or P100 filters when using stannic chloride for the test
4. Mirror(s) for fitting respirator.

Conducting Test

Note – The technician must always cover the free end of the smoke tube with tubing to minimize the likelihood of injury.

1. Bring in subjects ahead of time, show them how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit.
2. Tell them how to select a respirator – hold each chosen facepiece up to the face and eliminate those that obviously do not give an acceptable fit.
3. Review the following comfort and fit criteria with each person:
 - a. Position of mask on the nose
 - b. Room for eye protection
 - c. Room to talk
 - d. Position of mask on face and cheeks
 - e. Chin properly placed
 - f. Adequate strap tension, but not too much
 - g. Fit across nose bridge
 - h. Respirator of proper size for distance from nose to chin
 - i. Tendency of respirator to slip
 - j. Self-observation in mirror

STANNIC CHLORIDE SMOKE FIT TEST (continued)

4. Instruct subject on how to conduct self-fit test and have him/her conduct one; also that if it works proceed with the fit test, otherwise the subject may need to select another respirator
5. Allow subjects to select respirators from a sufficient number of models and sizes and to self-fit test those selected
6. Conduct sensitivity test as follows (see instructions next page):
 - a. Advise test subjects that the smoke irritates the eyes, lungs, and nasal passages and keep the eyes shut
 - b. Carefully direct a small amount of the smoke in the test subject's direction to determine that he/she can detect it
 - c. After detecting the irritant smoke, the subject puts the respirator on and performs the required self-fit check(s)
7. Conduct these tests as on the following pages. The person must still be sensitive after the fit test or the test results are invalid. Complete the test record for each person that is successfully fitted
8. Read the material on the following page

STANNIC CHLORIDE SMOKE FIT TEST (continued)

Preliminary Remarks

Correct respirator fit is serious business. Wearing an improperly fitting respirator is false security, which makes you think you can go into dusty or other areas without serious consequences.

Dust respirators are for dust only. Each respirator has a **specific** purpose. A dust respirator will not filter out toxic gases. Make sure you're using the correct respirator.

Persons with facial hair can't be fit with a respirator, and can't legally work in areas where a respirator is required. A caring supervisor will feel obliged to send you home if you're not clean shaven and need to use a respirator. Repeat court cases have upheld management's rights to require persons working in respirator-use areas to be clean-shaven or sent home.

HOW WE PLAN TO FIT TEST YOU

1. Before you select and put on a respirator, we will need to expose you to a small amount of the irritant smoke to see if you are sensitive to it.
2. You will then select the respirator that seems to fit you best following the procedures below.
3. We will then subject you to irritant smoke with the respirator on and while you are performing certain exercises.
4. Finally we will repeat the exposure to a small amount of irritant smoke with the respirator off.

STANNIC CHLORIDE SMOKE FIT TEST (continued)

Close your eyes now and I'll blow some in your direction. Let me know what effect it has on you.

1. Now that we've determined that you are sensitive to the irritant smoke, you will select a comfortably-fitting respirator by holding it up against your face as it would be when in actual use. **This is the respirator you'll be legally authorized to use from now on if the remaining steps in the selection procedure are successful.**
2. You'll put the respirator on and properly adjust the straps. Note that if you must wear safety glasses or other head-mounted safety equipment in your work area, you must wear this equipment during these tests.
3. You'll wear the respirator for at least 5 minutes to determine if it's comfortable. You'll need to talk, walk, turn your head from side to side and up and down and make other movements that are similar to movements you make during your work in the respirator area of your workplace.
4. You'll do a self-fit test before the stannic chloride fit test. This involves (manufacturer's recommendations for self-fit testing)

5. If the respirator seems to be OK and to fit your face with no leaks, you are ready to be fit tested with the stannic chloride smoke. Remember -- **Breathing stannic chloride smoke is very uncomfortable and will cause you to cough! Also keep your eyes closed during the test – it burns your eyes!**
6. I'll blow stannic chloride smoke around the edges of your respirator from about 12 inches distance. If you don't cough,

I'll blow more smoke around your respirator from 9 and then from 6 inches while you're performing the following movements for 60 seconds each.
 - a. Normal breathing
 - b. Deep breathing (if you feel faint, ease up).
 - c. Turning your head from side to side and inhaling in each position.
 - d. Nodding your head up and down and inhaling in the up position.
 - e. Counting or reading the rainbow passage.
 - f. Grimacing while breathing.
7. If during any of the above exercises the stannic chloride makes you cough, the respirator doesn't fit and will not protect you. You'll need to select another respirator and start over.

STANNIC CHLORIDE SMOKE FIT TEST (continued)

Since you didn't cough when subjected to irritant smoke with the respirator on we'll need to check your sensitivity to irritant smoke once more. Close your eyes now and I'll blow some in your direction again. Let me know what effect it has on you.

The test indicates that you are still sensitive to the irritant smoke, but were unaffected with the respirator on. These results indicate that the respirator fits. Remember, this is the only respirator you are legally approved to wear. Before you can legally use a different respirator, another fit test will need to be conducted.

Respirator Fit Testing Record

This is to certify that _____, has been trained and fitted in the use, limitations, and maintenance of the following respirator:

Manufacturer _____
 Model number _____
 Protection against _____

using the following protocol.

Bitrex Solution Aerosol _____
 Saccharin Solution Aerosol _____
 Stannic Chloride Smoke _____

The following test exercises were performed while being tested for at least 60 seconds each.

1. Normal breathing
2. Breathing deeply
3. Turning head from side to side, inhaling in each position
4. Nodding head up and down, inhaling in the up position
5. Counting or reading the rainbow passage

“ I acknowledge that I have received respirator training and have been fit test according to the above instructions. By my signature, I verify:

_____ Saccharin or Bitrex Protocol -- That I did not detect the test solution during any of the actions required in fit testing me with the respirator on which this test qualifies me for. I did, however, taste the test solution during the sensitivity test”.

_____ Stannic Chloride Protocol – That I did not smell the stannic chloride smoke with the respirator on and (or) did not need to cough because of it”. I did smell the smoke when tested for sensitivity with the respirator off.

Signature of Person Fit Tested

Date

Signature of Tester

Date

