

APPENDIX 9

Respiratory Protection Program

WAC 296-841 & 296-842

Respiratory Protection Program



Introduction

Respirators are used to protect employees from inhaling hazardous chemicals in the air. These chemicals can be in the form of gases, vapors, mists or dust. **If you provide respirators to your employees to protect them from airborne chemical hazards, you must have a written respiratory protection program.**

The written program must spell out how you do the following at your workplace:

- How the proper respirators for the particular hazards are selected and issued (include a list of respirators used),
- When and how respirators will be used in routine work activities, infrequent activities, and foreseeable emergencies such as spill response, rescue or escape situations,
- How medical evaluations of respirator wearers is provided,
- How respirator fit-testing is done,
- How respirators in use are cleaned, stored, inspected and repaired or discarded,
- How sufficient high purity air is provided for air-supplied respirators (if you use them),
- How employees are trained about respiratory hazards at your workplace,
- How employees are trained on the proper use of the respirators used at your workplace,
- How you evaluate the effectiveness of your respiratory program.

The answers to the above “how” questions will depend on the unique conditions at your workplace. The information must be specific and reflect what you actually do or require to be done, not just what seems like the right thing to do. It must describe actual conditions and actions at your workplace.

To provide proper protection, respirators must be the right type, must be worn correctly at all times and must be maintained properly. They are prone to leakage, depend on the correct behavior of individual employees and may require much maintenance and management oversight. This is why they are considered as a last resort to protect employees from airborne hazards.

It is often more protective, less trouble, and even cheaper to eliminate or reduce the respiratory hazard through various ways like exhaust ventilation, changes in process, or enclosure of the process. Sometimes the use of a hazardous material itself can be eliminated. When there is no alternative, a respirator program must be implemented to protect your employees from adverse health effects of exposure to chemicals or particles in the air above their permissible exposure limits.

Respirators are typically used in three different situations –

- routine or regular exposure to processes or activities involving chemicals or other airborne particulates,
- infrequent, but predictable occasions where there is chemical or particulate exposure, or
- emergencies where there is a chemical leak or spill or an exposure to harmful airborne particulates.

The written respiratory program must address all these situations if they occur or could occur at your facilities.

If you **allow** employees to wear respirators (either their own or those you provide), **but don't require their use**, see the WAC 296-842 requirements on voluntary use of respirators.

The WISHA Respirators Rule requires that you designate one person as the “program administrator” who is responsible for the whole program. This person should be reasonably knowledgeable about chemical exposure, respirators and their uses and limitations and will need to keep track of respirator fit-testing, use, storage, cleaning and maintenance. Don't give this job to an untrained or unmotivated employee. Training for any person acting as respirator program administrators is available from the University of Washington OSHA Training Institute, from respirator vendors and/or from CATHOLIC ARCHDIOCESE OF SEATTLE.

The following sample respirator program will meet the WISHA requirements for a written program **if all the blanks are filled in and it reflects actual practices at your worksite.**

Catholic Archdiocese of Seattle Respiratory Protection Program

Our respirator program administrator is the Archdiocese of Seattle Safety Program Manager.

Our administrator's duties is to work in conjunction with the parish/school or agency Safety Program Manager to oversee the development of the respiratory program and make sure it is carried out at the workplace. The administrator will also evaluate the program regularly to make sure procedures are followed, respirator use is monitored and respirators continue to provide adequate protection when job conditions change.

Selection of Respirators

We have evaluated our use of chemicals at this location and found respirators must be used by employees in the following locations or positions or doing the following duties, tasks or activities:

Employee position or activity	Chemicals or products used	NIOSH approved respirators assigned	When used (routinely, infrequently, or in emergencies)

We selected these respirators based on the following information: [optional: attach air sampling results that show where respirators are required]

Table 5 Assigned Protection Factors (APF) for Respirator Types	
If the respirator is an	Then the APF is
Air-purifying respirator with a: <ul style="list-style-type: none"> • Half-facepiece • Full-facepiece <p>Note: Half-facepiece includes ¼ masks, filtering facepieces (dust masks), and elastomeric (rubber) facepieces.</p>	10 100
Powered air-purifying respirator (PAPR) with a: <ul style="list-style-type: none"> • Loose-fitting facepiece • Half-facepiece • Full-facepiece, equipped with HEPA filters, chemical cartridges or canisters • Hood or helmet, equipped with HEPA filters, chemical cartridges or canisters 	25 50 1000 1000
Air-line respirator with a: <ul style="list-style-type: none"> • Half-facepiece and designed to operate in demand mode • Loose-fitting facepiece and designed to operate in continuous flow mode • Half-facepiece and designed to operate in continuous-flow, or pressure-demand mode • Full-facepiece and designed to operate in demand mode. • Full-facepiece and designed to operate in continuous-flow or pressure-demand mode • Helmet or hood and designed to operate in continuous-flow mode 	10 25 50 100 1000 1000
Self-contained breathing apparatus (SCBA) with a tight fitting: <ul style="list-style-type: none"> • Half-facepiece and designed to operate in demand mode • Full facepiece and designed to operate in demand mode • Full-facepiece and designed to operate in pressure-demand mode 	10 100 10,000
Combination respirators: <ul style="list-style-type: none"> • Find the APF for each type of respirator in the combination. • Use the lower APF to represent the combination 	The lowest value
For help in using this table, see the “Helpful Tool” from the Respirators Rule	

Use **Table 6** below to select air-purifying respirators for particle, vapor, or gas contaminants.

Table 6
Requirements for Selecting Air-purifying Respirators

If the contaminant is a:	Then
<p>Gas or vapor</p> 	<p>Provide a respirator with canisters or cartridges equipped with a NIOSH-certified, end-of-service-life indicator (ESLI) (<i>note: there are just a few of these</i>)</p> <p>or</p> <p>If a canister or cartridge with an ESLI is not available, develop a cartridge change schedule to make sure the canisters or cartridges are replaced before they are no longer effective (<i>note: most cartridge respirators fit in this category</i>)</p> <p>or</p> <p>Select an air-supplying respirator</p>
<p>Particle, such as a dust, spray, mist, fog, fume, or aerosol</p> 	<p>Select respirators with filters certified to be at least 95% efficient by NIOSH. For example, N95s, R99s, P100s, or High Efficiency Particulate Air filters (HEPA)</p> <p>Or</p> <p>You may select respirators NIOSH certified as “dust and mist,” “dust, fume, or mist,” or “pesticides.” You can only use these respirators if particles primarily have a mass median aerodynamic diameter of at least 2 micrometers <i>Note: These latter respirators are no longer sold for occupational use, but some employers may still be using them.</i></p>

Medical Evaluations

Every employee of the Catholic Archdiocese of Seattle who must wear a respirator will be provided with a medical evaluation before they are allowed to use the respirator. Our first step is to give the attached medical questionnaire to those employees. Employees are required to fill out the questionnaire in private and send or give them to the physician selected by Parish/School or Agency to provide the medical examination. Completed questionnaires are confidential and will be sent directly to medical provider without review by management.

If the medical questionnaire indicates to our medical provider that a further medical exam is required, this will be provided at no cost to our employees by the physician selected by Parish/School or Agency to provide the medical examination. We will get a recommendation from this medical provider on whether or not the employee is medically able to wear a respirator.

Additional medical evaluations will be done in the following situations:

- our medical provider recommends it,
- our respirator program administrator decides it is needed,
- an employee shows signs of breathing difficulty,
- changes in work conditions that increase employee physical stress (such as high temperatures or greater physical exertion).

Respirator Fit-testing

All employees who wear tight-fitting respirators will be fit-tested before using their respirator or given a new one.

- Fit-testing will be repeated annually.
- Fit-testing will also be done when a different respirator facepiece is chosen,
- when there is a physical change in an employee's face that would affect fit, or
- when our employees or medical provider notify us that the fit is unacceptable.
- No beards are allowed on wearers of tight-fitting respirators. Respirators are chosen for fit-testing following procedures in the WAC 296-842, Table 11. Fit-testing is not required for loose-fitting, positive pressure (supplied air helmet or hood style) respirators.

We perform fit-testing using one or more of the following fit-testing protocols (*circle protocol you decide to use*)

- Irritant smoke protocol
- Banana Oil (isoamy acetate) protocol
- Bitrex protocol
- Saccharin protocol
- Quantitative Fit-testing

*Note: It is your choice which procedure to use. **Some respirator vendors or occupational health clinics may perform fit-testing for you.***

Documentation of our fit-testing results will be kept on file in the personnel office.

Our respirators will be checked for proper sealing by the user whenever the respirator is first put on, using the attached seal check procedures:

Respirator storage, cleaning, maintenance and repair

Our non-disposable respirators will be stored in the following clean locations:

Respirators will be cleaned and sanitized every day they are to be worn and/or whenever they are visibly dirty. (This does not apply to paper dust masks which are disposed daily.) Respirators will be cleaned according to the attached instructions (either the manufacturers instructions or the Respirators Rule cleaning procedures.)

All respirators will be inspected before, and after, every use and during cleaning. In addition, emergency respirators and self-contained tank-type supplied air respirators in storage will be inspected monthly.

Respirators will be inspected for damage, deterioration or improper functioning and repaired or replaced as needed. Repairs and adjustments are done by the Safety Program Manager or his/her designee who is trained in respirator maintenance and repair.

On respirators with vapor or gas cartridges, the cartridges will be regularly replaced according to the manufacturer's recommended replacement schedule.

Type of respirator cartridge	Location or job duties	Chemicals in use	Replacement schedule

Respirator Use

The Program Administrator will monitor the work area in order to be aware of changing conditions where employees are using respirators.

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.

If corrective glasses or other personal protective equipment is worn, it will not interfere with the seal of the facepiece to the face.

Note: Full-facepiece respirators can be provided with corrective glasses since corrective lenses can be mounted inside a full-facepiece respirator. Contact lenses can also be used with full facepiece respirators if they do not cause any problems for the employee.

A seal check will be performed every time a tight-fitting respirator is put on.

The program administrator will make sure that the NIOSH labels and color-coding on respirator filters and cartridges remain readable and intact during use.

Employees will leave the area where respirators are required for any of the following reasons:

- to replace filters or cartridges,
- when they smell or taste a chemical inside the respirator,
- when they notice a change in breathing resistance
- to adjust their respirator,

- to wash their faces or respirator,
- if they become ill,
- if they experience dizziness, nausea, weakness, breathing difficulty, coughing, sneezing, vomiting, fever or chills.

No Catholic Archdiocese of Seattle employee will wear any respirator in any area or under any condition that has been designated as IDLH (immediately dangerous to life or health). Areas and conditions so designated by Parish/School or Agency as IDLH include the following: Any area designated as a "Confined Space." Work in these areas will be performed by qualified contractors.

Supplied air respirators will NOT be worn or used by employees of Catholic Archdiocese of Seattle.

Respirator Training

Training is done by Catholic Archdiocese of Seattle Safety Program Manager with assistance from our respirator supplier and/or Catholic Archdiocese of Seattle before employees wear their respirators and annually thereafter as long as they wear respirators. Our supervisors who wear respirators, or supervise employees who do so, will also be trained on the same schedule.

Additional training will also be done when an employee uses a different type of respirator or workplace conditions affecting respiratory hazards or respirator use have changed.

Training will cover the following topics:

- Why the respirator is necessary;
- The respirator's capabilities and limitations;
- How improper fit, use or maintenance can make the respirator ineffective;
- How to properly inspect, put on, seal check, use, and remove the respirator;
- How to clean, repair and store the respirator or get it done by someone else;
- How to use a respirator in an emergency situation or when it fails;
- Medical symptoms that may limit or prevent respirator use;
- Our obligations under the Respirators Rule.

CATHOLIC ARCHDIOCESE OF SEATTLE has adopted the PowerPoint training program provided by WISHA for half and full-face respirator.

Respiratory Program Evaluation

We evaluate our respiratory program for effectiveness by doing the following steps:

- Checking results of fit-test results and health provider evaluations.
- Talking with employees who wear respirators about their respirators – how they fit, do they feel they are adequately protecting them, do they notice any difficulties in breathing while wearing them, do they notice any odors while wearing them, etc.
- Periodically checking employee job duties for changes in chemical or particulate exposure.
- Periodically checking maintenance and storage of respirators.
- Periodically checking how employees use their respirators.
- Other_____

Recordkeeping

The following records will be kept:

- A copy of this completed respirator program
- Employees' latest fit-testing results
- Employee training records
- Written recommendations from our medical provider

The records will be kept at Parish/School or Agency personnel office.

Employees will have access to these records.

Voluntary Respirator Use - WAC 296-842-11005

You Must:

Ensure voluntary use of respirators is safe.

Definition:

Voluntary use is respirator use that is requested by the employee AND permitted by the employer **when NO respiratory hazard exists.**

IMPORTANT: If you choose to require respirator use, use is NOT voluntary and the required use sections of WAC 296-842 apply.

You must:

Make sure voluntary respirator use **DOES NOT:**

- Interfere with an employee's ability to work safely, such as restricting necessary vision or radio communication; OR
- Create health hazards.

Note: Examples of health hazards include:

- Skin irritation, dermatitis, or other health effects caused by using a dirty respirator;
- Illness created by sharing contaminated respirators;
- Health effects caused by use of an unsafe air supply, such as carbon monoxide poisoning.

You must:

Provide all voluntary respirator users with the advisory information in Table 2 at no cost to them.

You must:

Develop and maintain a written program that includes the following:

- Medical evaluation provisions as specified in WAC 296-842-140.
- Procedures to properly clean and disinfect respirators, according to WAC 296-842-22015, if they are reused.
- How to properly store respirators, according to WAC 296-842-17010, so that using them does not create hazards.
- Procedures to make sure there is a safe air supply, according to WAC 296-842-200, when using air-line respirators and SCBAs.
- Training according to WAC 296-842-160 when necessary to ensure respirator use does NOT create a hazard.
- **Exemption:** If employees use only filtering-facepiece respirators and do so only voluntarily, you do not need to develop and maintain a written program.

Note:

- Pay for medical evaluations, training, travel related costs, and wages. You **DO NOT** need to pay for respirators employees use only voluntarily.
- If you have both voluntary and required respirator users, you may choose to treat voluntary users as required users. Doing this exceeds the requirements in this section.
- Use Table 2 to provide information to employees who voluntarily use any type of respirator.

You Must:

- Keep copies of:
 - Your current written respirator program
 - Written recommendations from the LHCP
- Allow records required by this section to be examined and copied by affected employees and their representatives. (Reference WAC 296-62 Part B – Access to Records for additional requirements that apply to medical records.)

Note: See Table 2 on next page.

Table 2

Advisory Information for Employees Who Voluntarily Use Respirators

- Respirators protect against airborne hazards when properly selected and used. WISHA recommends voluntary use of respirators when exposure to substances is below WISHA permissible exposure limits (PELs) because respirators can provide you an additional level of comfort and protection.
- If you choose to voluntarily use a respirator (whether it is provided by you or your employer) be aware that **respirators can create hazards for you**, the user. You can avoid these hazards if you know how to use your respirator properly AND how to keep it clean. Take these steps:
 - Read and follow all instructions provided by the manufacturer about use, maintenance (cleaning and care) and warnings regarding the respirator's limitations.
 - Choose respirators that have been certified for use to protect against the substance of concern. The National Institute for Occupational Safety and Health (NIOSH) certifies respirators. If a respirator is not certified by NIOSH, you have no guarantee that it meets minimum design and performance standards for workplace use.
 - A NIOSH approval label will appear on or in the respirator packaging. It will tell you what protection the respirator provides.
 - Keep track of your respirator so you do not mistakenly use someone else's.
 - **DO NOT** wear your respirator into:
 - Atmospheres containing hazards that your respirator is not designed to protect against; e.g., a respirator designed to filter dust particles will not protect you against solvent vapor, smoke or oxygen deficiency.
 - Situations where respirator use is required.

How to Evaluate your Workplace for Employee Exposure to Chemicals

Respirators are required when employees are exposed to (can inhale) chemicals or dust in the air that are at harmful levels. These can include vapors from handling solvents, spray-painting, dust from grinding or sanding, or welding fumes. In CATHOLIC ARCHDIOCESE OF SEATTLE, the Parish/School or Agency Safety Program Manager is quite familiar with each employee's job, what chemicals they use or how much welding, spray painting, grinding or sanding they do. Our employees may have stated that the chemical odors or dust bothered them or that they were worried about their chemical exposure. We may

have switched to less hazardous chemicals or we may have no alternative but to use more hazardous chemicals to do the job. However, without some knowledge of the amount of chemical or dust in the air in the workplace, we cannot know whether our employees are exposed to harmful amounts of chemicals.

Just about every chemical has its toxic amount or level that will make a person sick. Even too much table salt can be harmful. On the other hand, highly toxic chemicals can be used without harm to employees if handled properly. Most commonly used chemicals have safe limits or “permissible exposure limits” in the air that if exceeded will cause harm. A list of chemicals with WISHA permissible exposure limits is available on the web at:

<http://www.lni.wa.gov/WISHA/Rules/respiratoryhazards/PDFs/Table3-exposurelimits.pdf>. Whenever these limits are exceeded, you are required to take steps to protect your employees from that air exposure. If the levels cannot be reduced below the permissible exposure limits by ventilation, changes in the process or reduction in the length of time of exposure, then you must provide respirators to exposed employees.

The best way to accurately determine the levels of chemicals or dust in the air is to do some type of air sampling. There are a variety of instruments and devices for measuring air contaminants. Some are simple and cheap, but most are quite expensive. The methods for doing the air sampling accurately are usually complicated and should not be done by a layperson. Air sampling can be done by WISHA industrial hygiene consultants at your request. This is a free service that will not result in a citation or penalty or a report to WISHA safety inspectors. To request this service, contact the Department of Labor & Industries Office in Spokane. You can also have a private industrial hygiene consultant conduct air sampling. They can be found under “industrial hygiene services” in the Yellow Pages or you can contact CATHOLIC ARCHDIOCESE OF SEATTLE for industrial hygiene services.

If you belong to a trade association or industry group (such as WAMOA), that organization may have information on common chemical hazards and methods of controls. The material safety data sheets for products used also provide information about the hazards of the chemicals, permissible exposure limits, methods of controls and recommended respirators.

Respirator Fit Test Record

Name: _____

Type of qualitative/quantitative fit test used:

Name of test operator: _____

Date: _____

Respirator Mfr./Model/Approval no. **Size** **Pass/Fail** **or Fit Factor**

Note: "Fit factor" is numerical result of quantitative fit test from instrument reading

1. _____ S M L P F

2. _____ S M L P F

3. _____ S M L P F

4. _____ S M L P F

Clean Shaven? Yes___ No___ (Fit-test cannot be done unless clean-shaven)

Medical Evaluation Completed? Yes___ No___

NOTES:

This record indicates that you have passed or failed a qualitative or quantitative fit test as shown above for the particular respirator(s) shown. Other types will not be used until fit tested.

Respirator Training Record

Employee Name (printed)

I certify that I have been trained in the use of the following respirator(s):

This training included the inspection procedures, fitting, maintenance and limitations of the above respirator(s). I understand how the respirator operates and provides protection. I further certify that I have heard the explanation of the respirator(s) as described above and I understand the instructions relevant to use, cleaning, disinfecting and the limitations of the respirator(s).

Employee Signature

Instructor Signature

Date

Employer- Provided Information for Medical Evaluations

This form may be used by the employer to give to your medical provider, information on respirator use by your employees, but it is not a required form. You can also consult directly with your medical provider and discuss the information below. You must also give the medical provider a copy of your written respiratory program and copy of the Respirators Rule

Specific Respirator Use Information

Employee Name: _____

Company name: _____

Employee job title: _____

Company Address: _____

Company contact person and phone #: _____

1. Will the employee be wearing protective clothing and/or equipment (other than the respirator) when using the respirator?

Yes/No _____ If "Yes," describe protective clothing and/or equipment:

2. Will employee be working under hot conditions (temperature exceeding 77°F)?

Yes/No _____ If "Yes", describe nature of work and duration:

3. Will employee be working under humid conditions? Yes / No _____

4. Describe any special or hazardous conditions the employee could encounter when using the respirator (for example, confined spaces, life-threatening gases).

Following are informational pages that can be used as attachments to the respirator program.

How to Select the Correct Respirator

The type and brands of respirators vary widely ranging from simple dust masks to supplied air respirators such as the kind firefighters wear.

Following is a description of the main types of respirators.



Dust Masks (filtering facepieces)

These simple, two-strap disposable dust masks are designed only for dusts. They are not as protective as other respirators, but do an adequate job in many cases, unless the dust is really toxic or copious. Don't confuse these two-strap masks with the less protective one-strap dust mask designed only for pollen or non-toxic dust.



Half-Face Air-Purifying Respirator

These respirators are sometimes called “half-face” or “half-mask” respirators since they cover just the nose and mouth. They have removable cartridges that filter-out either dust, chemicals or both. Selecting the correct cartridges is essential since they are designed for particular types of chemicals or dust. A reputable respirator vendor can assist you in selecting the correct cartridges. These cartridges are typically removable and sometimes interchangeable. Cartridges are available for solvents, ammonia, chlorine, acids and other chemicals. The cartridges must be changed out or replaced periodically, especially for chemicals, since they can absorb only so much contaminant before breakthrough occurs. A few cartridges are equipped with end-of-service indicators that show when a cartridge should be replaced. Most cartridges don't have this indicator and you must develop a change-out schedule to prevent breakthrough. The change-out schedule is based on the chemical concentration, physical work effort, temperature and humidity. Many respirator manufacturers have cartridge change schedule calculators available on the Internet.



Full-Face Air-Purifying Respirator

In some situations, you may need or want to use full-face respirators. This type of respirator is used when the air contaminant irritates the eyes. They also provide somewhat higher protection to the lungs since they tend to fit tighter and are less prone to leaking. These respirators also have replaceable cartridges that must be changed on a regular basis as described above for half-face respirators.



Powered Air Purifying Respirator (PAPR)

Powered Air Purifying Respirators have a battery pack that draws air through replaceable cartridges and blows into a full facepiece, helmet or hood. These respirators are often more comfortable in hot weather and some can provide more protection, depending on the type. The cartridges must be changed regularly as described for half-face respirators above.



Airline Respirator



Tank-type respirator (SCBA)

Supplied Air Respirators and Self-Contained Breathing Apparatus (SCBA)

The following is informational only. Employees of CATHOLIC ARCHDIOCESE OF SEATTLE will not perform work that requires supplied-air respirators.

Breathing Air Quality for Supplied Air Respirators (if used)

Only Grade D breathing air will be supplied to compressed air tanks for respirators.

Our compressors used for breathing air supply are non-oil lubricated and the air intake is located in an uncontaminated area. The brand name of our air compressor(s) and the location is as follows:

Our compressors are equipped with filters, water traps and sorbents to provide clean, safe air. They are maintained by:

Maintenance records are located at:

Optional: We use oil-lubricated compressor(s) used for breathing air. These compressor(s) are equipped with carbon-monoxide alarms, high-temperature alarms or both. They are located at:

Periodic carbon monoxide monitoring is done by:

On the following schedule on our compressor(s) with no carbon monoxide alarm:

If used, our airline respirators are equipped with air couplings that are not compatible with couplings to non-respirable air (plant air for example) or other gas systems.

If used, our air cylinders for supplied air respirators are inspected and tested according to federal DOT regulations.

In a few situations, you may need to provide a supplied air respirator to your employees. These situations include large chemical spills or leaks, entering a confined space where there is lack of oxygen or high levels of air contaminants, or working around extremely toxic chemicals. They may also be necessary working at hazardous waste sites, during sandblasting or in some spray painting operations. "Supplied air," means that clean air is provided by means of an air hose from a compressor or a pressurized air tank.

Supplied air respirators are required when a respiratory hazard is considered "immediately dangerous to life or health" (also called "IDLH").

Respiratory hazards are classified as IDLH as follows:

- There is a lack of oxygen (less than 19.5% oxygen)
- There is too much oxygen (more than 23.5% - a fire hazard)
- You know there are toxic chemicals in the air, but you don't know how much
- The amount of chemical in the air is known or expected to be above the IDLH level for that chemical. See the [NIOSH Pocket Guide to Chemical Hazards](#) for chemical IDLH levels.

Levels of chemicals above IDLH can occur in confined spaces, or enclosed spaces where there is little or no ventilation.

Employees of CATHOLIC ARCHDIOCESE OF SEATTLE will not work in areas designated as IDLH.



Emergency Escape Respirators

Emergency escape respirators, as the name implies, can only be used for one thing – to escape or exit from a room or building in an emergency, usually a large chemical release, leak or spill, or when a supplied air respirator fails or runs out of air. An escape respirator is typically a small bottle or tank of air connected to a facepiece that supplies 5-10 minutes of air. Some supplied air respirators will have an auxiliary bottle of air for escape that connects to the existing facepiece.

How do you decide which type of respirator to select?

- First, it must be the correct type for the air contaminant.
- Second, it must fit properly.
- Third, it must provide adequate protection for the amount of chemical in the air.

The more toxic or more concentrated the chemical is in the air, the higher the level of protection the respirator must provide.

Different respirators provide different protection. Depending on the amount of chemical in the air, you may need to use a respirator that provides more protection. Respirators are rated by their “assigned protection factor” (APF) which is a number between 10 and 10,000. The higher the number, the greater the protection. A respirator with a protection factor of 10 will provide adequate protection to levels of the chemical in the air 10 times the safe limit of that chemical. (See Table 5)

NIOSH Respirator Checklist

Voluntary Use of Filtering Facepieces (Dust Masks)

1. Are filtering facepieces (dust masks) provided which are clean and uncontaminated?
2. Does the use of the dust mask not interfere with the individual's ability to work safely?
3. Has a copy of "Voluntary Use" WAC been given to each voluntary wearer?

Voluntary Use of Respirators Other Than Dust Masks

4. Does the use of the respirator not interfere with the individual's ability to work safely?
5. Has a copy of "Voluntary Use" WAC been given to each voluntary wearer?
6. Is there a written respiratory protection program that includes the following?
 - a. Medical evaluations of individuals who will wear respirators; and
 - b. Procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, discarding and otherwise maintaining respirators.
7. Was a medical evaluation performed, before a respirator was used in the workplace, which determined the individual's ability to use a respirator?
8. Are respirators, which are issued for the exclusive use of an individual, cleaned and disinfected as often as necessary to be maintained in a sanitary condition?

Note: Exclusive use means the respirator is used only by one person and is not shared.

9. Are respirators, which are issued to more than one individual, cleaned and disinfected before being worn by different individuals?
10. Are respirators stored to be protected from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture or damaging chemicals?
11. Are respirators that are used in routine situations, inspected before each use and during cleaning?
12. Are respirators that fail an inspection or are otherwise found to be defective removed from service and either discarded or repaired?

Respirators Required or Respirators Needed to Protect an Individual's Health

13. Have engineering controls been employed, where possible, to prevent or reduce atmospheric contamination?
Note: Measures may include enclosure or confinement of an operation, general and local ventilation, and substitution of less toxic materials.
14. Is there a written respiratory protection program?
15. Does the written respiratory protection program include procedures for selecting respirators for use in the workplace?
16. Does the written respiratory protection program include medical evaluations of individuals who will wear respirators?
17. Does the written respiratory protection program include fit testing procedures for tight-fitting respirators?
18. Does the written respiratory protection program include procedures for proper use of respirators in routine as well as reasonably foreseeable emergency situations?
19. Does the written respiratory protection program include procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, discarding and otherwise maintaining respirators?
20. Does the written respiratory protection program include procedures to ensure adequate air quality, quantity and flow of breathing air for atmosphere-supplying respirators?
21. Does the written respiratory protection program include training of individuals with regards to the respirator hazards to which they are potentially exposed during routine and emergency situations?
22. Does the written respiratory protection program include training of individuals in the proper use of respirators, including putting on and removing them, limitations of use and their maintenance?
23. Does the written respiratory protection program include procedures for regularly evaluating the effectiveness of the program?
24. Has a program administrator been designated who is qualified by appropriate training and experience to administer or oversee the respiratory protection program and conduct the required evaluations of program effectiveness?
25. Are respirators, training and medical evaluations provided at no cost to individuals?
26. Are respirators selected based on the anticipated hazards?

27. Are all respirators NIOSH certified?
28. Has a potential respiratory hazard(s) been identified and evaluated?
Note: This evaluation shall include a reasonable estimate of a person's exposure to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form. Although personal air monitoring is the most reliable and accurate method to determine exposure, it is not required.
29. Are medical evaluations performed, before a respirator is used in the workplace, to determine an individual's ability to use a respirator?
30. Has an appropriate qualitative fit test or quantitative fit test been conducted on individuals who are using tight-fitting respirators?
Note: A record of the fit test should be maintained to document compliance.
31. Was the fit test conducted prior to the initial use of the respirator, whenever a different facepiece (size, style, model or make) is used, and at least annually thereafter?
32. Is the wearing of tight-fitting respirator facepieces prohibited whenever any condition that interferes with the face-to-facepiece seal or valve function is present?
Note: Facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function is prohibited.
33. Are corrective glasses or goggles or other personal protective equipment worn so as not to interfere with the seal of the facepiece to the face of the user?
34. Is a user seal check performed by the employee each time a tight fitting respirator is put on?
Note: User seal checks include positive and negative pressure checks to identify potential leakage around the facepiece.
35. Do individuals leave the respirator use area to wash their faces and facepieces as necessary, to replace filter, cartridge, or canister elements, or if they detect vapor or gas breakthrough, changes in breathing resistance, or facepiece leakage?
36. Are respirators that are issued for the exclusive use of an individual cleaned and disinfected as often as necessary to be maintained in a sanitary condition?
37. Are respirators that are issued to more than one individual, cleaned and disinfected before being worn by different individuals?
38. Are respirators, stored to be protected from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture or damaging chemicals?

39. Are respirators that are used routinely, inspected before each use and during cleaning?
40. Are respirators that fail an inspection or are otherwise found to be defective removed from service and either discarded or repaired?
41. Does compressed breathing air meet the requirements for Grade D Breathing Air?
Note: Documentation of breathing air quality should be maintained to show compliance.
42. Are compressors used to supply breathing air situated to prevent entry of contaminated air into the air supply system?
43. Are compressors used to supply breathing air constructed to minimize moisture content?
44. Are compressors used to supply breathing air equipped with air-purifying sorbent beds and filters to further ensure breathing air quality?
45. Are compressors used to supply breathing air provided with tags indicating the most recent date on which the air-purification filters or sorbent beds were changed, along with the signature of the authorized person performing the change?
46. Are high temperature or carbon monoxide alarms, or both, present on oil-lubricated compressors to monitor carbon monoxide levels?
47. Are filters, cartridges and canisters labeled and color-coded with the NIOSH approval label?
48. Has training been provided to individuals who wear respirators on why the respirator is necessary and its proper use, fit, and maintenance?
49. Has training been provided to individuals who wear respirators on the capabilities and limitations of the respirator?
50. Has training been provided to individuals who wear respirators on how to use the respirator during emergency situations?
51. Has training been provided to individuals who wear respirators on how to inspect, put on and remove, use, and check the seals of the respirator?
52. Has training been provided to individuals who wear respirators on procedures for maintenance and storage of the respirator?
53. Has training been provided to individuals who wear respirators on how to recognize medical signs and symptoms that may limit or prevent the effective use of respirators?
54. Are workplace evaluations conducted to ensure that the written respiratory protection program is being properly implemented?
55. Are records maintained for 30 years regarding medical evaluations, fit testing, and the respirator program?