

03 2000 Respirators

RESPIRATORY PROTECTION PROGRAM FOR GORDON H. BAVER

Reference Appendix I of this program for some definitions of terms and acronyms.

We have determined that employees working at certain locations and tasks are exposed to respiratory hazards during routine operations, as summarized in Appendix A (**Voluntary and Required Respirator Use**). Appendix A also identifies when emergency use of respirators may be warranted, and where voluntary use of respirators is authorized. Appendix B (**Employees Wearing Respirators**) individually identifies those employees required to use respiratory protection, or allowed to wear respirators on a voluntary basis. Workers participating in the respiratory protection program do so at no cost to themselves.

Engineering controls, such as ventilation and substitution with less toxic materials, are always the best means of reducing employee airborne exposures to hazardous chemicals. Such controls were considered for each of these operations and found to be not feasible, or did not reduce exposures low enough.

As required by OSHA, our company has developed this Respiratory Protection Program, which we implement and maintain as an important component of our Injury and Illness Prevention Program to enhance our employees' health and safety.

Employees that wish to wear respirators during certain operations that do not require use of respiratory protection: Management will review each of these requests on a case-by-case basis, and will provide respirators for voluntary use if the use of respiratory protection in a specific case will not jeopardize the health or safety of the employee.

Any employee who voluntarily wears a respirator (other than a disposable filtering facepiece respirator/dust mask) when a respirator is not required will be identified in Appendix B and is subject to the medical evaluation, cleaning, maintenance, and storage elements of this program, and must be provided with, and understand, the information provided in Appendix D (**Information for Employees Using Respirators When Not Required To**). Employees voluntarily wearing only a filtering facepiece respirator/dust mask are not subject to these requirements, but are still required to be provided with, and understand, the information provided in Appendix D.

The instructions provided by the manufacturers of the respirators our employees use will be incorporated as part of our written program. Employee training will include references to these instructions, as appropriate.

RESPONSIBILITIES

SITE SUPERVISOR

Duties of the site supervisor include the following:

- Identify work areas, processes or tasks that require workers to wear respirators.
- Develop procedures for selecting proper respirators, including the correct filters/cartridges for air purifying respirators (APR).
- Ensure effective administration of the medical surveillance program.
- Develop procedures for proper fit testing of tight-fitting respirators.
- Develop procedures for proper use of respirators in routine and reasonably foreseeable emergency situations.
- Develop procedures and schedules for cleaning, storing, inspecting, repairing, discarding, and maintaining respirators.
- Ensure effective respirator user training on the respiratory hazards to which they are potentially exposed, and the proper use of respirators.
- Ensure employees voluntarily using respirators are provided with and understand the information provided in Appendix D
- Determine suitable, objectively determined respirator cartridge change out schedules that the users must abide by.
- Determine the user seal check procedure that employees will be required to implement every time they don a respirator.
- Determine the respirator cleaning procedures that employees will be required to implement.
- Determine the respirator inspection procedures that employees will be required to implement.
- Ensure maintenance of all records required by this program.
- Develop procedures for regularly evaluating the effectiveness of this program.

FOREMEN

Duties of the foremen include ensuring:

- Employees under their supervision (including new hires) receive appropriate training, fit testing, and medical evaluations, as required.
- Availability of appropriate respirators and accessories.
- Awareness of tasks requiring the use of respiratory protection and enforcement of the proper use of respiratory protection.
- Respirators are properly cleaned, maintained, inspected, and stored.
- Respirators fit well and do not cause discomfort.
- Additional fit testing is conducted if an employee indicates a respirator does not seem to fit any more or it is found to be unacceptable.
- Continual monitoring of work areas and operations to identify respiratory hazards.
- Coordination with Management on how to address respiratory hazards or other concerns regarding the program.
- Employees change respirator cartridges out according to the prescribed change-out schedules.

EMPLOYEES

Duties of employees include the following:

- Wear their respirators when and where required and in the manner in which they were trained.
- Care for and maintain their respirators as instructed, and store them in a clean, sanitary location.
- Change their respirator cartridges out according to the prescribed change-out schedules.
- Inform their supervisor if the respirator no longer fits well or is found to be unacceptable.
- Inform their supervisor or Management of any respiratory hazards that they feel are not adequately addressed in the workplace and of any other concerns that they have regarding the program.
- Inform their supervisor of the need for a medical reevaluation.

RESPIRATOR SELECTION PROCEDURES

- A hazard evaluation will be conducted for each operation, process, or work area whenever it is reasonable to suspect that employees may be exposed to concentrations of airborne contaminants in excess of OSHA permitted levels. This includes:
 - Ensuring it incorporates our Hazard Communication Program, including the identification and development of a list of hazardous chemicals used in the workplace, by department or work process, and obtaining a Safety Data Sheet for each of these chemicals.
 - Reviewing work processes to determine where potential exposures to these hazardous chemicals may occur.
 - Employee exposure monitoring and evaluation of objective information to estimate potential hazardous exposures. Outside expertise, such as our worker' compensation insurance carrier or a private consultant, will be used, as needed. This information will also be used as needed to determine APR cartridge change-out schedules.
 - Assuming IDLH (immediately dangerous to life or health) conditions when worker exposures have not been, or cannot be, evaluated.
- Respirators to be used are selected in accord with applicable OSHA standards and based on the hazards to which workers are exposed, as well as workplace and employee user factors affecting respirator performance and reliability.
- A sufficient number of respirator sizes and models will be provided to the employees during fit testing to identify the respirators that correctly fit, and are acceptable to, the users.
- Only National Institute of Occupational Safety and Health (NIOSH)-certified respirators are to be selected and must be used in compliance with their certification.
- For IDLH atmospheres:
 - Full facepiece pressure demand SARs with auxiliary SCBA unit or full facepiece pressure demand SCBAs, with a minimum service life of 30 minutes, must be provided.
 - Respirators used for escape only are NIOSH-certified for the atmosphere in which they will be used.
 - Oxygen deficient atmospheres are considered IDLH.
- For Non-IDLH atmospheres, respirators are to be:
 - Selected as appropriate for the chemical nature and physical form of the contaminant and adequate to protect the health of the employee under routine and reasonably foreseeable emergency situations.
 - Equipped with end-of-service-life indicators (ESLIs) if the APR respirators are used for protection against gases and vapors. The respirator cartridge change-out schedule provided

below under **Storage, Cleaning, Maintenance and Filter Change-Out Procedures and Schedules** must be implemented if there is no ESLI.

- Equipped with filters certified by NIOSH under 30 CFR part 11 as HEPA, or other filters certified by NIOSH for particulates under 42 CFR part 84 if the APR respirators are to be used for protection against particulates.

Appendix C (**Employee Airborne Hazardous Chemical Assessments**), attached to this program, contains the latest employee airborne chemical exposure data on which our current respirator selection is based. Additional employee exposure determinations will be made, and Appendix C updated accordingly, any time there are changes made to how materials are used or processed that could significantly change employee exposure levels.

MEDICAL EVALUATION

Employees are not permitted to wear respirators (except for voluntary use of a filtering facepiece/dust mask) until a physician or other licensed healthcare professional (PLHCP) has determined that they are medically able to do so.

The medical questionnaire and examinations will be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee.

- This evaluation will be conducted using the questionnaire provided in Appendix J.
- Management will provide a copy of this questionnaire to all employees requiring medical evaluations.
- To the extent feasible, we will assist employees who are unable to read the questionnaire. When this is not feasible, the employee will be sent directly to the PLHCP for medical evaluation.
- All affected employees will also be given a stamped and addressed envelope for mailing the questionnaire directly to the PLHCP.

Employees will be:

- Permitted to fill out the questionnaire on company time.
- Granted follow-up medical exams as required by the Respiratory Protection standard, and/or as deemed necessary by the PLHCP.
- Granted the opportunity to speak with the PLHCP about their medical evaluation, if they so request.

The Program Management will provide the PLHCP with:

- A copy of this program and a copy of T8CCR, section 5144, Respiratory Protection standard.
- Each employee's assigned job title and work area, and the list of hazardous substances that they may be exposed to.
- The employee's:
 - Proposed respirator type and weight.
 - Length of time required to wear the respirator.
 - Expected physical work load (light, moderate, or heavy).
 - Potential temperature and humidity extremes.
 - Any additional protective clothing required.

If the respirator is a negative pressure respirator and the PLHCP finds a medical condition that may place the employee's health at increased risk if the respirator is used, we will provide a PAPR if the PLHCP's medical evaluation finds that the employee can use such a respirator.

After an employee has received clearance and begun to wear his or her respirator, additional medical evaluations will be provided if:

- The employee reports signs and/or symptoms related to their ability to use a respirator, such as shortness of breath, dizziness, chest pains, or wheezing.
- The PLHCP or supervisor informs Management that the employee needs to be reevaluated.
- Information from this program, including observations made during fit testing and program evaluation, indicates a need for reevaluation.
- A change in workplace conditions (e.g., physical work effort, protective clothing, temperature) that may result in a substantial increase in the physiological burden placed on an employee.

FIT TESTING

- All employees required to wear tight-fitting facepiece respirators must pass a fit-test:
 - Prior to initial use.
 - Whenever a different respirator facepiece (size, style, make, model) is used.
 - At least annually.
- Additional fit-testing is required when the employee:
 - Reports, or the PLHCP, supervisor, or Management observes changes in the employee's physical condition that could affect respirator fit.
 - Notifies us or our PLHCP that the fit of the respirator is unacceptable and wishes to select a different respirator facepiece.
- Employee fit-testing will be conducted according to the protocols provided by OSHA.
- Employees will be fit-tested to the same make, model, style, and size of respirators that they actually wear.

PROCEDURES FOR PROPER RESPIRATOR USE

All filters, cartridges, and canisters must be labeled with the appropriate NIOSH certification label. The label must not be removed or defaced while it is in use.

EMPLOYEES ARE PERMITTED TO WEAR RESPIRATORS AS LONG AS THEY:

- Use them under the conditions specified by this program, and in accord with the training they receive on the use of each particular model. The respirator must not be used in a manner for which it is not certified by NIOSH or by its manufacturer.
- Conduct user seal checks according to Appendix F each time that they don their respirator.
- Not wear tight-fitting respirators if they have facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function, or any condition that interferes with the face-to-facepiece seal or valve function. This includes the use of headphones, jewelry, prescription eye ware or personal protective equipment (PPE). Equally important, the wearing of a respirator must not hinder the effectiveness of PPE that is worn, something that will be accommodated through the selection of different styles of PPE and respirators.

- Leave the respirator use area:
 - To wash their faces and respirator facepieces as necessary to prevent eye or skin irritation associated with respirator use.
 - If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece.
 - To replace the respirator or the filter, cartridge, or canister elements.

SUPERVISORS MUST:

- Take actions to ensure that employees implement all of the above requirements.
- Ensure that a respirator is replaced or repaired should an employee detect vapor or gas breakthrough, change in breathing resistance, or leakage of the facepiece, and before allowing them to return to the work area.
- Ensure adequate surveillance of work area conditions and degree of employee exposure or stress.
- Involve the Management when there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness, so that continued effectiveness of the respirator can be evaluated.

RESPIRATOR MALFUNCTION (NON-IDLH)

For any malfunction of an APR, the respirator wearer must inform their supervisor that the respirator no longer functions, and go to the designated area to maintain the respirator. The supervisor must ensure that the employee receives the needed parts to repair the respirator, or is provided with a new respirator.

STORAGE, CLEANING, MAINTENANCE AND FILTER/CARTRIDGE CHANGE-OUT PROCEDURES AND SCHEDULES

CLEANING

- Respirators are to be regularly cleaned and disinfected at the jobsite.
- Respirators issued for the exclusive use of an employee are to be cleaned and disinfected as often as necessary to maintain sanitary conditions.
- Respirators issued to more than one employee will be cleaned and disinfected before being worn by different individuals.
- The cleaning instructions in Appendix G must be implemented.

Management will ensure an adequate supply of appropriate cleaning and disinfection material at the cleaning station. If supplies are low, employees should contact their supervisor or Management.

MAINTENANCE

- Respirators are to be properly maintained at all times to ensure that they function properly and adequately protect the employees.
- Maintenance involves a thorough visual inspection (Appendix H) for cleanliness and defects.
- Worn or deteriorated parts will be replaced prior to use.
- No components will be replaced or repairs made beyond those recommended by the manufacturer.

- Employees are encouraged to leave their work area and go to a designated area that is free of respiratory hazards when they need to wash their face and respirator facepiece (using Appendix G procedures) to prevent any eye or skin irritation, or to replace the filter, cartridge or canister, or when they detect vapor or gas breakthrough or leakage in the facepiece, or detect any other damage to the respirator or its components.
- The inspection procedures in Appendix H must be implemented.

CARTRIDGE CHANGE-OUT SCHEDULES

- Employees wearing APRs for protection against airborne particulates need to change the filters on their respirators when they first begin to experience difficulty breathing (i.e., resistance) while wearing their masks.

The Table below outlines the cartridge change-out schedules for each operation where employees are using respiratory protection against all airborne contaminants other than particulates

Task/Location/Operation	Respirator Model and Cartridge Type	Airborne Contaminants	Change-out Schedule* (hours)

*Starts as soon as the cartridges are unsealed, not when the employees start to use them.

STORAGE

- Respirators must be stored in a clean, dry area, and in accord with the manufacturer’s recommendations.
- Each employee will have his/her name on the respirator storage container, which will only be used to store that employee’s respirator.

DEFECTIVE RESPIRATORS

- Respirators that are defective or have defective parts must be immediately tagged and taken out of service.
- As soon as an employee discovers a defect in a respirator, they must bring the defect to the attention of their supervisor.
- Supervisors will tag and give all defective respirators to Management.
- Management will decide whether to:
 - Temporarily take the respirator out of service until it can be repaired.
 - Perform a simple fix on the spot such as replacing a head strap.
 - Dispose of the respirator due to an irreparable problem or defect.
- Employees will be provided with a replacement respirator that they have been fit-tested for before returning to work.

TRAINING

- Management will provide training to respirator users and their supervisors on the contents of this Respiratory Protection Program, their responsibilities under it, and on the OSHA Respiratory Protection standard.
- Workers will be trained prior to using a respirator in the workplace.
- The training will be comprehensive, understandable and recur annually, and more often if necessary.
- Supervisors must also be similarly trained prior to supervising workers who must wear respirators even though supervisors themselves do not use a respirator. This is so they can ensure that each employee can demonstrate knowledge of at least 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.
 - The general requirements of the Respiratory Protection standard.
- Management and supervisors will ensure that employees are retrained at least annually or as needed, such as when the following situations occur:
 - Changes in the workplace conditions or the types of respirator render previous training obsolete.
 - Inadequacies in the employee's knowledge or use of the respirator indicate that the worker has not retained the requisite understanding or skill.
 - Any other situation arises in which retraining appears necessary to ensure safe respirator use.

New employees that may have been previously trained within the past 12 months: Re-training will not be required if Management is able to demonstrate that the new employee has received the training within the last 12 months, it addressed the elements specified by our respirator program, and the employee can demonstrate knowledge of those elements. Previous training not repeated initially by us will be provided no later than 12 months from the date of the previous training.

DOCUMENTATION AND RECORDKEEPING

Management will ensure documents supporting our respirator program are maintained and made available to affected employees as follows:

- A written copy of this respirator program.
- The OSHA standard.
- Training materials used in our program.
- Fit test records. These records will include:
 - The name or identification of the employee tested.
 - Type of fit test performed.
 - Specific make, model, style, and size of respirator tested.
 - Date of test.
 - Test results

- Copies of all other records for all employees covered under the respirator program (except medical records).
- Records of medical evaluations will be retained and made available in addition to the completed medical questionnaire. The PLHCP's documented findings are confidential and will remain with the PLHCP. We will only retain the physician's written recommendation regarding each employee's ability to wear a respirator

Employees can access the above information by contacting the office.

Should we use the services of a temporary employment service, we will treat their employees as if they are ours and include them in our Respiratory Protection Program, as appropriate.

Employees are to contact Management if they have questions about this plan or wishes to review it. Our plan will be maintained by Management to ensure that the policies are carried out and the plan is effective.

Appendix A

Voluntary and Required Respirator Use

Work Location and Task	Airborne Hazardous Materials of Concern	Required Respirator APF	Type of Respiratory Protection (e.g., half- or full-face, APR or SAR, filtering facepiece)	Indicate if “mandatory”, “voluntary*”, or “emergency” use

Appendix B

Employees Wearing Respirators

Employee	Make, Model, and Size of Respirator	Indicate if “mandatory”, “emergency”, or “voluntary”	Date of Last Medical Clearance	Date* of Last Fit-Test

*must be at least annually

Appendix D

INFORMATION FOR EMPLOYEES USING RESPIRATORS WHEN NOT REQUIRED UNDER THE STANDARD

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by Cal/OSHA standards. If a respirator is provided for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator's limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designated to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

Appendix E

EMPLOYEE RESPIRATOR TRAINING ROSTER

Content of the training will be as outlined in our written Respiratory Protection Program and the back of this sheet.

Date: _____ Department: _____

Name and title of person conducting the training:

- Initial training
(reference attached
training topic checklist)
- Repeat training

Employee Name	Signature

TRAINING TOPIC CHECKLIST

- 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.
- The general requirements of the Respiratory Protection standard

Appendix F

USER SEAL CHECK PROCEDURES

FACEPIECE POSITIVE AND/OR NEGATIVE PRESSURE CHECKS

Positive pressure check. Close off the exhalation valve and exhale gently into the facepiece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the facepiece without any evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.

Negative pressure check. Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s), inhale gently so that the facepiece collapses slightly, and hold the breath for ten seconds. The design of the inlet opening of some cartridges cannot be effectively covered with the palm of the hand. The test can be performed by covering the inlet opening of the cartridge with a thin latex or nitrile glove. If the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

Appendix G

RESPIRATOR CLEANING PROCEDURES

Employees must implement the following respirator cleaning procedures:

- Remove filters, cartridges, or canisters. Disassemble facepieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
- Wash components in warm (43 deg. C [110 deg. F] maximum) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt. Employees will be provided with detergents, cleaners, and brushes.
- Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), preferably running water. Drain.
- When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:
 - Hypochlorite solution (50 ppm of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of water at 43 deg. C (110 deg. F).
 - Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6-8 grams ammonium and/or potassium iodide/100 cc of 45% alcohol) to one liter of water at 43 deg. C (110 deg. F).
 - Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.
- Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
- Components should be hand-dried with a clean lint-free cloth or air-dried.
- Reassemble facepiece, replacing filters, cartridges, and canisters where necessary.
Test the respirator to ensure that all components work properly.

Appendix H

RESPIRATOR INSPECTION PROCEDURES

Employees will use the following checklist when inspecting respirators before each use and during cleaning:

- Facepiece
 - Pliability
 - Cracks, tears, or holes
 - Face mask distortion
 - Cracked or loose lenses/face shield
 - Contamination of the interior
- Valves:
 - Residue or dirt
 - Cracks or tears in valve material
 - Valve distortions and proper seating
- Head straps:
 - Breaks or tears
 - Loss of elasticity
 - Functional buckles
- Filters/Cartridges:
 - Approval designation label
 - Gaskets
 - Cracks or dents in housing
 - Proper cartridge for the hazard

Appendix I

SOME TERMS AND ACRONYMS USED IN THIS PROGRAM

- APF: assigned protection factor. The level of respiratory protection that a particular type of respirator is expected to provide, assuming it's used via an effectively implemented respirator program.
- APR: air purifying respirator. Relies on filtration to remove airborne contaminants.
- Fit factor. A quantitative estimate of the fit of a particular respirator to a specific individual. For example, a fit factor of 100 means the concentration of an airborne contaminant is expected to be 100 times less inside the respirator facepiece compared to the outside.
- IDLH: Immediately Dangerous to Life or Health
- MUC: maximum use concentration.
- NIOSH: National Institute of Occupational Safety and Health
- PAPR: powered air purifying respirator.
- PEL: Permissible Exposure Level
- PLHCP: Physician or other licensed health care professional. Someone that is authorized under their Pennsylvania license to conduct the medical evaluation of employees required to wear a respirator.