Calvin College Respiratory Protection Program			Revision 2
Prepared by: Heather Chapman	Date: 10/7/10	Approved by: Cabinet	Date:

1.0 POLICY

It is the policy of Calvin College to comply with the MIOSHA Respiratory Protection Standard Part 451.

2.0 PURPOSE

The purpose of this program is to set uniform policies and procedures concerning the use of respirators at Calvin College.

The following written program is intended to help in identifying the respiratory hazards, ways to control them, selection of respirators and the use and maintenance of respirators. Respirators are to be used when and where engineering or administrative controls are not feasible, while these controls are being installed and implemented, or in emergencies.

3.0 DEFINITIONS

- Air Monitoring - The sampling and measuring of pollutants present in the atmosphere.
- Contaminants - Airborne materials that are respirable and may cause damage to a person's health.
- Dust Mask - A disposable respirator which does not provide exchangeable cartridges.
- Fit Testing - A test arranged by EH&S to check for the adequacy in the fit of the respirator. Respirator users must undergo this testing annually.
- Negative Pressure Test - A quick test used to check for air leaks around the face seal and exhalation valve on a respirator. Block off the respirator cartridge inlet openings with the gloves or palms of hands; If using hands, be careful not to press too hard on the face piece, as it will artificially improve the seal; Inhale gently, holding that negative pressure for at least 5 seconds; If no inward leakage of air is detected, the person has passed the test. If leakage is detected (usually felt as a cool sensation against the skin or a loss in pressure) either the respirator is malfunctioning or a gross leak exists between the face and face piece.
- Positive Pressure Test: A quick test used to check for air leaks around the face seal and inhalation valve on a respirator. To perform this test: Block off the exhalation valve cover opening(s); Exhale gently, creating a slight positive pressure within the face piece; Maintain positive pressure for at least 5 seconds; If no outward leakage is detected, the test has been passed. If leakage is detected (usually felt as a cool sensation against the skin or as a loss of pressure hold), either the respirator is malfunctioning or a gross leak exists between the face and face piece.

4.0 DUTIES AND RESPONSIBILITIES

Environmental Health & Safety Office (EH&S):

- Develop and maintain the respiratory protection policy along with other accompanying documents.
- Arrange all necessary training, fit testing, medical evaluations, and medical physicals.
- Perform at least annual monitoring of known respiratory protection areas according to the degree of the hazard in order to assure respirator effectiveness
- Aid supervisors in conduct hazard assessments annually and when needed to identify areas where airborne contaminants may exist.
- Ensure proper selection, storage and maintenance of respiratory protection equipment.
- Audit the program at least annually to ensure effectiveness, and maintain all records associated with the respiratory program.
- Use hazard assessments and air monitoring to determine required respiratory protection for any new or changed hazards.

- Ensure that engineering and administrative controls are looked into prior to assigning use of respirators.

Supervisors:

- Enforce the proper use of respirators in areas where required.
- Know the hazards that require the use of a respirator and the types of respirators that should be used for task/job.
- Ensure that respirators are properly cleaned, maintained, and stored in a dust free environment according to the manufacturer's directions. When it is unclear as to what respiratory equipment is needed, consult EH&S.
- Ensure that employees have received the proper respiratory protection training.
- Ensure that all employees using respirators are medically able.
- Inform EH&S when a change in any process or job task is anticipated. This will allow EHS to conduct air monitoring and determine the appropriate personal protective equipment needed.
- Continually monitor work areas and operations to identify respiratory hazards.
- Ask EH&S any questions related to the respiratory program.

Employees in the respirator program:

- Receive initial and annual fit test with a medical exam to permit respirator use.
- Wear the appropriate respirator.
- Routinely inspect assigned respiratory protection before and after each use and replace parts as needed.
- Perform user seal checks before each use.
- Assure good seal between respirator and face. Conditions that interfere with a good face- piece seal may include growth of a beard or sideburns, temple pieces on eyeglasses or the absence of one or both dentures.
- Carefully maintain and disinfect the respirator and store it in a sanitary location according to the manufacturer's directions.
- Notify a supervisor or EH&S if the respirator no longer fits well or if there are any medical concerns.
- Notify your supervisor or EH&S if there are any concerns or any questions regarding the program.

5.0 RESPIRATORY SELECTION

- All respirators and cartridges shall be NIOSH certified.
- Industrial hygiene surveys and hazard assessments will be conducted to determine respiratory protection requirements.
- Two different brands of respiratory protection will be provided to assure availability of a properly fitted respirator.
- EH&S will determine the initial selection of respiratory equipment for particular tasks with the aid of supervisors and hazard assessments in accordance to applicable standards.

6.0 RESPIRATOR USE

- Prior to daily use of a respirator, the employee shall inspect the general condition of the respirator including facepiece, valves, cartridges, and strap. Notify EH&S should parts need replacement.
- Each time an employee puts on a respirator, a user seal check shall be performed.
    - Positive Pressure Check – Block the openings of the exhalation valve guard and exhale slightly. If the facepiece bulges slightly and no air leaks between the facepiece and your face are detected, an effective seal has been obtained. If air leaks are detected, reposition the facepiece on your face and repeat the procedure until an effective seal is obtained.

- Negative Pressure Check – Place palms over the openings in the cartridges or remove the cartridges and place palms over the inhalation connectors. Inhale and hold your breath for 5 seconds. If the facepiece collapses slightly and no air leaks between the facepiece and your face are detected, an effective fit has been obtained. If air leaks are detected, reposition the facepiece on your face and repeat the procedure until an effective seal is obtained.

- Employees shall not wear an air-purifying respirator when facial hair comes between the facepiece and face, which may interfere with a proper seal.
- Use of goggles, safety glasses, or prescription lenses shall not interfere with obtaining a proper seal.
- Employees shall leave respiratory protection areas if vapor or gas breakthrough occurs or if a change in breathing resistance occurs. The respirator shall be inspected to determine the cause and necessary parts and/or cartridges to be replaced.
- Respirators maintained for emergency use shall be inspected and sanitized after each use and inspected at least monthly.

7.0 RESPIRATOR CARTRIDGES

- Particulate cartridges must be NIOSH approved.
- New or changed processes and equipment will be evaluated through EH&S to determine future need for respiratory protection.
- Respiratory supplies may be found in the plant building. Provided through EH&S.
- Respirators and mask cartridges must be replaced according to the following:

Respirator/Cartridge	Change out time
P100 filters for Air-Purifying Reusable Half-Mask Respirator (APR)	When difficulty breathing (i.e., resistance) is felt replace the cartridge
Disposable Respirators “Dust Masks” for general use	Daily
Disposable Respirators “Dust Masks” for Pandemics	Throw away the mask when day ends, or when the task-requiring respirator for the day is finished
Organic vapor cartridges for APRs	When difficulty breathing (i.e., resistance) is felt or bi-weekly
Mercury cartridges	When the End of Service Life Indicator changes color

8.0 CLEANING

- An employee must never wear a defective respirator.
- The EH&S will ensure adequate supply of appropriate cleaning and disinfecting material.
- If supplies are low, employees are to contact their supervisor or go to the Physical Plant.
- Manufacturer's instructions and recommendations should always be followed to prevent damage or deterioration of the mask.
- When not in use, place the respirator in a clean, dry plastic bag or other airtight container.
- Employees wearing their respirator daily must thoroughly clean and disinfect their respirator weekly (minimum). Employees using their respirator infrequently (i.e. once per week) shall thoroughly clean and disinfect their respirator monthly. PPE wipes can be used to clean respirators after each use. If respirator has not been used since the last cleaning, no re-cleaning is necessary. Emergency respirators shall be cleaned after each use.
- Respirators shall be cleaned and disinfected using procedures recommended by the manufacturer.

9.0 MEDICAL CLEARANCE

- A medical examination must be passed to establish an employee's fitness to wear a respirator.
- EH&S must be notified by supervisors or the prospective respirator user to set up necessary training, fit tests, and examinations. EH&S department may be reached at 6-8591.
- Examinations must be conducted once a year or when a change in the person's condition may affect their capability of receiving adequate protection from the respirator.
- Fit Testing:
    - All employees participating in the Respiratory Protection Program will be fit tested prior to initial use of the respirator and annually thereafter or as required by applicable substance- specific regulations.
    - Fit testing shall be performed in accordance with Appendix A in OSHA's § 1910.134.
- Fit testing must be conducted annually or if there is a change in the employee's physical condition that may alter the fit of the respirator.
- Records shall be maintained by EH&S

10.0 STORAGE

- Respirators must be accessible to the work area.
- Respirators will be stored in a manner that protects them from damage, contamination, sunlight, extreme temperatures, excessive moisture, damaging chemicals, and dust
- Dust respirators must be placed in clean, dry plastic bag or other airtight container.

11.0 REPAIRS

- Respirators which fail inspection will be removed from service and repaired or adjusted.
- Employees must report any instance of defective or ineffective respirators to their supervisor immediately.
- Respirators taken out of service are tagged "out of service" or disposed of immediately.
- Notify EH&S should repair or disposal be required.

12.0 TRAINING

- Training must be presented in a clear manner to the employee
- All employees using respirators will be trained before initial use, annually, and when the following occur:
    - Changes in the workplace or the type of respirator to be used.
    - An inadequacy in the employee's knowledge or use indicates the employee needs retraining.
    - Any other situation arises in which retraining appears necessary.
- Training must cover the following:
    - Respiratory hazard(s) employees may be exposed to:
        - Nature of the hazard(s)
        - Extent of the hazard(s)
        - Effects of the hazard(s)
    - An explanation of why specific type of respiratory protection has been selected, why it is necessary
    - How improper fit, usage and maintenance can compromise the protective effect of the respirator.
    - Explanations of the operation, limitations and capabilities of the selected respirator.
    - Instruction in procedures for:
        - Inspecting the respirator(s)
        - Donning and removing the respirator
        - Checking fit and seals of respirators
        - Wearing respirators, including giving sufficient practice to enable the employee(s) to become thoroughly familiar, confident and effective in performing the above tasks.

- An explanation of maintenance procedures, including cleaning, disinfecting and storage.
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
- Instruction on how to deal with emergency situations involving the use of respirators or with respirator malfunction.
- The general requirements of the Respiratory Protection Standard (29 CFR 1910.134)
- Instruction on the written respiratory protection program, its location and its availability.

Employees who voluntary use respirators must be shown Appendix D in the Respiratory Protection Standard (29 CFR 1910.134) that is included in the Voluntary Respirator Use section (Appendix C)

13.0 Program Evaluation

- Workplace inspections and evaluations shall be performed annually to ensure that the provisions of the policy are effective.
- Respirator types and cartridges will be assessed annually to assure program effectiveness.

14.0 HISTORY

Revision	Date	Description
0	02/04/2008	Policy from 08 superseded 06
1	12/03/2009	Changed formatting Removed/Replaced: user guides Added/added to: Duties and responsibilities, definitions, respirator selection, respirator use, cleaning, respirator cartridges, medical clearance, storage, repairs, and training
2	10/7/2010	Reformatted; added detail to pressure checks in Definitions section; Revised change-out schedule for dust masks

APPENDIX A

Voluntary Respirator Use

To receive a voluntary respirator inform your supervisor or the EH&S department Calvin College will provide respirators at no charge to employees for voluntary use for the following work processes:

- Half-facepiece APRs with P-100 cartridges while working in construction areas.
- 3M 9211 or 3M 8211 N-95 Particulate Respirators while working in construction areas or when cleaning dusty areas.
- 3M 9211 N-95 with an exhalation valve while using the One-Step Germicidal Detergent and Deodorant in the West Michigan Regional Lab.
- 3M 8577 P-95 particulate, for relief against nuisance level organic vapors while using solvents, cleaners or paints.
- 3M 8214 N-95 particulate, for relief against nuisance levels of organic vapors or metal fumes produced from welding, brazing, cutting and other operations involving heating of metals.

Voluntary use must comply with the procedures for Medical Evaluation, Fit Testing, Respirator Use, Cleaning, Maintenance and Storage.

EH&S department must authorize upon request any voluntary use of respiratory protective equipment on a case-by-case basis, depending on workplace conditions and medical evaluations.

OSHA required 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 MIOSHA standards. If your employer provides respirators 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 US 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 designed to protect against. For example, the 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.