Hobart and William Smith Colleges

Geneva, New York

Respiratory Protection Program

Copies of the Respiratory Protection Program:

1. Human Resources Office
2. Electronic Version (HWS HR website)

Last Date Reviewed: 4/14/20
Reviewed By: Stephen Valentine, CIH (Partners Environmental)

Purpose:

The purpose of the Respiratory Protection Program (further referred to as the program) at Hobart and William Smith Colleges (further referred to as HWS or the colleges) is to ensure the appropriate selection, use and care of respiratory protection used to protect faculty and staff from exposure to inhalation hazards.

The program provides faculty and staff with respiratory protection information through policies and procedures regarding:

- Respirator selection.
- Medical surveillance.
- Fit testing.
- Respirator use guidelines.
- Respirator training.

Program Applicability:

1. OSHA Respiratory Protection – 29 CFR 1910.134.

2. This program is applicable to all HWS operations and activities, conducted by HWS faculty and staff, that use respiratory protection:

    - Scandling Boat – Painting, scraping, etc.

3. Buildings and Grounds (contracted service), as well as any other contracted services, are required to comply with their own Respirator Program in accordance with the OSHA standard.

4. Voluntary use of dust masks for exposures below the OSHA PEL are not included in the program elements. Faculty and staff using dust masks will be provided with a copy of Appendix D of the OSHA standard (see Attachment).

Program Responsibilities:

1. The **Office of the President (Provost)** will:

    - Support the policies and procedures of the program.
    - Designate appropriate resources (i.e., funds, personnel, etc.) for the implementation of the program.
    - Assign responsibilities and authority to designated personnel to implement and maintain the program.

2. The **EHS Coordinator** will:

   - Act as the Respiratory Protection Program Administrator.
   - Coordinate the evaluation of faculty and staff exposure to air contaminants.
   - Assist in selection of appropriate respiratory protection for designated uses.
   - Coordinate medical evaluations and fit testing for faculty and staff.
   - Provide or coordinate respirator training.
   - Conduct or coordinate periodic surveillance of respirator use in the facility.
   - Conduct an annual evaluation of the effectiveness of the program.

3. **Department Chairperson(s)** will:

   - Ensure that faculty and staff under their supervision have received appropriate training, medical evaluations and fit testing.
   - Be aware of work tasks requiring respiratory protection.
   - Enforce the proper use of respiratory protection when necessary.

4. **Faculty and Staff (respirator users)** will:

   - Understand how to properly use your respirator and know its limitations.
   - Use respiratory protection for the required job tasks.
   - Check their respirator for proper seal prior to each use.
   - Be clean-shaven to ensure a proper face seal, if required for the respirator used.
   - Care for and maintain their respirator as instructed, and store them in a clean, sanitary location.

Engineering Controls:

1. Engineering controls will be used, as feasible, to control exposures to air contaminants. When engineering controls are not feasible, or being implemented, respiratory protection will be used to protect the health of faculty and staff.

Exposure Monitoring:

1. Exposure monitoring will be conducted, as appropriate, to evaluate exposure to air contaminants in the workplace and properly determine respiratory protection required.

Respiratory Protection Use:

1. Respiratory protection will be provided to faculty and staff, as necessary, to control exposure to air contaminants. Job tasks that require the use of respiratory protection include:

Job Task	Hazards	Approximate Exposure Level	Required Respiratory Protection
Scandling Boat – Painting, Scraping, etc.	Solvents, Dust, etc.	<PEL	Half- or Full-Face Air Purifying Respirator (APR) with organic vapor/P100 cartridges.

2. Respiratory protection will be provided to ensure that exposure levels are controlled to at least below the OSHA PEL.

3. Respiratory protection will be used according to established procedures (see Attachments).

4. The use of respiratory protection by faculty and staff will be overseen by the EHS Coordinator.

5. Since users will be wearing tight-fitting respirators, a good face-to-face seal is required. Users must remain clean-shaven.

6. Respirator users will conduct positive and negative pressure checks, as feasible, each time the respirator is put on to ensure a good fit.

7. Protection factors to be used for available respiratory protection are:

Respiratory Protection	Protection Factor	Example
Full-Face APR	50	If the air concentration of toluene is 100 ppm, a respirator with a protection factor of 10 would reduce the concentration 10 times or 10 ppm.
Half-Face APR	10	
Dust Mask (voluntary)	10	

8. Respirator cartridges will be changed, as necessary, according the following schedule:

Respiratory Protection	Cartridge Change Schedule
Air Purifying Respirator with Organic Vapor/P100 Cartridges	Change cartridges after 8 hours of use, detected breakthrough (i.e., odor) inside the respirator, breathing resistance or three (3) months from the use start date.
Dust Mask (voluntary)	Change dust mask when breathing resistance is detected during inhalation or at the end of the shift.

9. All respirator cartridges will be marked with the in-use start date and hours used will be marked on the side of the cartridge, to track use.

10. Respirators will be selected on the basis of the specific job task and exposure hazard (i.e., chemical, exposure level, etc.). The EHS Coordinator will make respirator selections.

11. Faculty and staff will be trained or instructed in the proper use of a respirator. Training will provide to the user with an opportunity to handle, wear and the proper fitting instructions.

12. The respirator will be assigned to a single worker. This worker will perform cleaning and sanitizing of their individual respirator.

Respiratory Protection, Care and Storage:

1. Each respirator user is responsible for the following respirator maintenance:

    - ***Cleaning and Sanitizing***: Respirators will be wiped clean after each use. A thorough cleaning will be performed periodically and consist of the following:

        a. Remove the cartridges from the respirator. Cartridges must never be washed and disinfected. Remove filters, screens and headbands.
        b. Immerse the respirator in warm water and a mild detergent solution. Rinse in clean warm water and allow the respirator to dry.
        c. Headbands and faclets should be washed with warm water and rinsed with clean water. Do not use solvents or dry by direct application of heat. After the respirator is dry, change the cartridges as necessary.

    - ***Inspection:*** The user shall inspect each respirator routinely before and after each use. They must be inspected for wear and deterioration of their components. Special attention will be given to rubber or plastic parts, which can deteriorate. The face piece, especially the face seal surface, headband, valves, connecting tubes, fittings and cartidges must be in good condition. After cleaning and sanitizing, each respirator shall be inspected to determine if it is in proper working condition.

    - ***Storage:*** Respirators shall be stored in such a manner to protect them against dust, sunlight, extreme cold, excessive moisture or damaging chemicals. When a respirator is not in use it will be placed in a plastic bag and stored in a safe location. Respirators shall be stored so that face pieces and exhalation valves will rest in a normal position to prevent the rubber or plastic from reforming into an abnormal shape.

Medical Evaluations and Fit Testing:

1. All faculty and staff participating in the Respiratory Protection program, excluding those using voluntary dust masks, will receive medical evaluations:

    - Prior to the use of the respiratory and annually thereafter, unless deemed more or less frequent by the physician.

- The evaluation criteria will be established by the licensed physician, but will follow OSHA guidelines, including the medical questionnaire, or similar, and applicable physical examination, as deemed necessary.
- The licensed physician performing the medical evaluation will provide a medical clearance form (assuming no or acceptable limitations) prior to allowing faculty or staff to use the respirator.

2. Fit testing will be required for all tight fitting respirators. Fit testing is required before faculty or staff can use the respirator and must also be performed annually.

Information and Training:

1. Training on respiratory protection will be provided at the following frequency:

    - Initially for all new or transferred faculty and staff, prior to performing any job tasks requiring respiratory protection.
    - Annually for all affected faculty and staff.
    - As deemed appropriate to ensure the continued effectiveness of the program.

2. Training will include the following elements:

    - OSHA Respiratory Protection Standard.
    - Chemical hazards and respirator selection.
    - Respirator use, limitations and cartridge change-out schedule.
    - Fitting the respirator.
    - Respirator inspections.
    - Procedures for maintaining, cleaning and storing the respirator.

Program Evaluation:

1. The EHS Coordinator will review the program on an annual basis to ensure the continued effectiveness of the policy and procedures.

2. Periodic surveillance of work area conditions will be made by the Program Administrator to continually evaluate the conditions of respirator use.

3. The program will be updated, as needed, to address any deficiencies and to reflect any changes in the implementation of the program.

STANDARD USE PROCEDURES

Half-Face Air Purifying Respirator (APR)
Standard Use Procedures

Putting On The Respirator:

1. Inspect the respirator and respirator components:
   - Configuration of the facepiece for deformities.
   - Presence of the inhalation and exhalation valves.
   - Presence and condition of the cartridge holder O-ring.
   - Condition and elasticity of the straps and headband harness.
   - Condition of respirator cartridges. Proper respirator cartridges.
2. Put the respirator on:
   Note: User must be clean shaven at all points of the face to facepiece seal. Safety glasses must not interfere with the straps, nosepiece or headband harness.
   - Comfortably seat the facepiece over the face and chin.
   - Attach the straps and headband over the head.
   - Adjust the tightness of the straps.
3. **Verify the respirator is sealed properly by conducting a positive and negative pressure check. *Note: Conduct this check each time the respirator is removed.***
   - *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.
   - *Negative Pressure Check* - Close off the inlet opening of the cartridges by covering with the palm of the hands, inhale gently so that the facepiece collapses slightly, and hold the breath for ten seconds. 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.
4. Change respirator cartridges according to the designated change-out schedule.

Taking Off The Respirator:

1. Take off the respirator:
   - Loosen and/or unclip the respirator straps and pull the mask away from the face.
   - Wash face.
2. Clean and disinfect the respirator:
   - Remove the respirator cartridges. Discard, as needed.
   - Wash respirator in warm water with mild detergent.
   - Rinse thoroughly in clean water and shake off excess water.
   - Clean respirator with a disinfectant respirator wipe.
   - Hand-dry with a clean lint-free cloth and allow to dry.
   - Replace respirator cartridges. Inspect the respirator and respirator components, as noted above.
3. Place in a clean storage bag.
4. Store in a clean and dry location at room temperature.

Full Face Air Purifying Respirator (APR)
Standard Use Procedures

Putting On The Respirator:

1. Inspect the respirator and respirator components:
   - Configuration of the facepiece for deformities.
   - Presence of the inhalation and exhalation valves.
   - Presence and condition of the cartridge holder O-ring.
   - Condition and elasticity of the straps and headband.
   - Condition of respirator cartridges. Proper respirator cartridges.
2. Put the respirator on:
   Note: Users must be clean shaven at all points of the face to facepiece seal.
   - Comfortably seat the facepiece over the face and chin.
   - Attach the straps and headband over the head.
   - Adjust the tightness of the straps.
3. **Verify the respirator is sealed properly by conducting a positive and negative pressure check. *Note: Conduct this check each time the respirator is removed.***
   - *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.
   - *Negative Pressure Check* - Close off the inlet opening of the cartridges by covering with the palm of the hands, inhale gently so that the facepiece collapses slightly, and hold the breath for ten seconds. 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.
4. Change respirator cartridges according to the designated change-out schedule.

Taking Off The Respirator:

1. Take off the respirator:
   - Loosen and/or unclip the respirator straps and pull the mask away from the face.
   - Wash face.
2. Clean and disinfect the respirator:
   - Remove the respirator cartridges. Discard, as needed.
   - Wash respirator in warm water with mild detergent.
   - Rinse thoroughly in clean water and shake off excess water.
   - Clean respirator with a disinfectant respirator wipe.
   - Hand-dry with a clean lint-free cloth and allow to dry.
   - Replace respirator cartridges.
3. Inspect the respirator and respirator components, as noted above.
4. Place in a clean storage bag.
5. Store in a clean and dry location at room temperature.

Disposable Dust Respirator
Standard Use Procedures

Putting On The Respirator:

1. Inspect the respirator and respirator components:
   - Configuration of the facepiece for deformities.
   - Presence of the exhalation valves (if equipped).
   - Condition and elasticity of the straps and headband harness.
   - Condition of the filtering facepiece.
2. Put the respirator on:
   Note: Users must be clean shaven at all points of the face to facepiece seal. Safety glasses must not interfere with the straps, nosepiece or headband harness.
   - Comfortably seat the facepiece over the face and chin.
   - Attach the straps and headband over the head.
   - Adjust the tightness of the straps and nosepiece.
3. **Verify the respirator is sealed properly by conducting a positive pressure check. *Note: Conduct this check each time the respirator is removed.***
   - *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.
4. Change the respirator according to the designated change-out schedule.

Taking Off The Respirator:

1. Take off the respirator:
   - Loosen and/or unclip the respirator straps and pull the mask away from the face.
   - Wash face.
2. Dispose of the respirator.

APPENDIX D

(Appendix D to Sec. 1910.134 - Mandatory)

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 OSHA standards. If your employer provides respirators for your voluntary use, of 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 designed 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.