

## SUNY Cortland – Environmental Health and Safety Office

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### Respiratory Protection Program

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## Respiratory Protection Program

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### I. Introduction

This document is the Respiratory Protection Program for SUNY Cortland, and it outlines requirements, guidelines, and other information involving use of respirators. This program complies with the Occupational Health and Safety Administration's (OSHA) Respiratory Protection Standard (29 CFR 1910.134) and other relevant regulations. While this program applies principally to employees, Section VII of this program outlines requirements, guidelines, and other information for student use of respiratory protection.

Respirators are never used as the primary means of controlling hazards. Every effort is made to eliminate airborne hazards before respirators are used. When airborne hazards cannot be eliminated, respirators are used in conjunction with engineering controls and other sound safety practices.

Respirators are provided to employees without cost for certain job-related hazards. Tasks and processes for which specific respiratory protection is required are indicated in department Hazard Assessments (see Section III), Job Hazard Analysis (see Section IV), and during other hazard reviews conducted by the Environmental Health and Safety (EH&S) Office. Employees are required to wear respirators whenever it is specified. In instances where an employee believes that a respirator is required, but

not specified, the employee or the department supervisor should contact the EH&S Office for assistance.

Employees receive respiratory protection training in accordance with the protocol outlined in Section V of this document. Training is provided before employees are assigned to tasks, when they are given new assignments, and when it is determined that additional training is necessary.

## II. Responsibilities

**EH&S Office** – The EH&S Office is responsible for: 1) reviewing and updating this program; 2) evaluating this program's effectiveness; 3) conducting Hazard Assessments and developing Job Hazard Analysis (see Sections III and IV); 4) providing technical guidance on selection and use of respiratory protection; 5) conducting respirator fit testing; 6) providing respiratory protection training; 7) arranging medical evaluations; and 8) maintaining records associated with this program.

**Employees** – Employees must complete a medical questionnaire prior to being approved to use respiratory protection. When employees are approved to use respiratory protection, they must: 1) wear respiratory protection whenever it is specified; 2) use respiratory protection in accordance with instructions given during training; 3) observe use restrictions, whenever applicable; and 4) observe use, care, and storage requirements. In instances where an employee's use of a respirator is voluntary, employees must observe guidance that is offered by the EH&S Office (see Section VI).

**Supervisors** – Supervisors must make sure that employees do not use respiratory protection until they are approved by the EH&S Office. When employees are approved to use respiratory protection, supervisors must enforce use, care, and storage requirements.

**Student Health Service Physician** – The Student Health Service physician will evaluate medical questionnaires that are submitted by students and supply written recommendations in accordance with the information outlined in Section VII. Additionally, the Student Health Service physician will handle health issues related to student use of respirators.

**Students** – See responsibilities outlined in Section VII.

## III. Hazard Assessments

A hazard assessment is a formal evaluation of job-specific tasks or processes and their associated hazards or risks. Once a hazard assessment is performed, appropriate personal protective equipment (PPE), including respirator use, is determined. While

hazard assessments are principally performed by the EH&S Office, supervisors and employees also provide input for these assessments.

Written certification that a hazard assessment has been performed is documented in department hazard assessments. Hazard assessments are available for each department where PPE is required. The EH&S Office will discuss hazard assessments and PPE selection during training sessions. Supervisors are required to maintain department hazard assessments and make them available to their employees.

#### **IV. Job Hazard Analysis**

A Job Hazard Analysis (JHA) is a document that provides written procedures to help eliminate job hazards and reduce accidents, injuries, illnesses, and incidents in the workplace. Specifically, a JHA: 1) outlines basic steps for a specific task; 2) identifies the hazards associated with the task; and 3) identifies safe operating procedures and PPE, including use of respirators, to reduce or eliminate hazards. Supervisors and employees are requested to use these documents to identify PPE that is required for specific tasks.

#### **V. Respiratory Protection Program**

##### **Hazard Elimination and Control**

Substitution, engineering controls, and administrative controls are first employed to eliminate or reduce atmospheric hazards. When these methods are not effective or feasible, appropriate respiratory protection is used. Processes and tasks for which respiratory protection is required are outlined in department hazard assessments, JHAs, and in Table 1 on page 7. Employees who require respiratory protection are contacted by the EH&S Office so that arrangements can be made to use a respirator. Final approval to use a NIOSH-certified respirator is not granted until medical evaluations, fit testing, and training are finalized.

##### **Medical Evaluations**

Prior to fit testing and training, employees must complete Parts A and B of the OSHA Respiratory Protection Standard medical questionnaire (Appendix C). The EH&S Office will assist employees with completing this questionnaire. Once completed, the EH&S Office sends the medical questionnaire to a physician or other licensed health care professional (PLHCP). As part of the medical evaluation agreement, the PLHCP is also given a copy of SUNY Cortland's Respiratory Protection Program and a copy of section (e)(5)(iii) of the Respiratory Protection Standard if this section of the standard is requested.

After the medical questionnaire is evaluated by the PLHCP, the EH&S Office obtains a written recommendation from the PLHCP regarding the employee's

ability to use a respirator. This written recommendation will provide: 1) limitations on respirator use, if applicable; 2) the need, if any, for follow-up medical evaluations; and 3) a statement that the employee has been provided with a copy of the written recommendation. Aside from written recommendations, employees will be provided with additional medical evaluations if: 1) medical signs or symptoms that are related to one's ability to use a respirator are reported; 2) the EH&S Office is informed that reevaluations are needed; and 3) a change occurs in the workplace that may result in a substantial increase in the physiological burden of an employee.

Records of employee medical evaluations are confidential and will be maintained by the EH&S Office for the duration of one's employment at SUNY Cortland plus 30 years.

### **Fit Testing**

Once it is determined that an employee is able to use a respirator, the EH&S Office will contact the employee to arrange for quantitative fit testing. Fit testing is performed prior to initial use of a respirator, whenever a different respirator is used, and at least annually thereafter. During fit testing, employees are fit tested with the same make, model, style, and size of respirator that will be used for job-specific tasks where use of the respirator is specified. Respirators that are used during fit testing are cleaned and disinfected after each use. It is noteworthy to mention that for tight-fitting respirators, facial hair must be removed before fit testing and before the respirator is actually used.

The following records are retained for fit testing: 1) the name of the employee; 2) the type of fit test performed; 3) specific make, model, style, and size of respirator tested; 4) date of the test; and 5) the quantitative results of the fit test. These records are retained by the EH&S Office until the next fit test is performed.

### **Training**

The EH&S Office provides respirator training to employees prior to initial use and annually thereafter. Additionally, retraining is provided when: 1) changes in the workplace or the type of respirator render previous training obsolete; 2) the employee's knowledge or use of the respirator indicate that comprehension or skill is lacking; and 3) other circumstances arise in which retraining appears necessary to ensure safe respirator use. Respirator training is generally provided to employees during fit testing.

The following information is discussed during training: 1) why respirators are necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator; 2) the limitations and capabilities of the respirator; 3) how to use the respirator effectively in emergency situations, including situations where the respirator can malfunction; 4) how to inspect, put on

and remove, use, and check the seals of the respirator; 5) maintenance and storage procedures; 6) how to recognize medical signs and symptoms that may limit or prevent the effective use of respirators; and 7) other requirements pertaining to the Respiratory Protection Program. Employees must demonstrate that they comprehend the information that is discussed during training.

## **Requirements for Respirator Use and Maintenance**

Requirements for respirator use and maintenance are summarized in this subsection.

1. Respirators must be inspected for integrity before each use and during cleaning. This includes, but is not limited to, the following respirator parts: facepiece, head straps, valves, cartridges, or filters.
2. Respirators that are defective must be discarded or repaired. In instances where a respirator is repaired, the employee must contact the EH&S Office for assistance. The EH&S Office will ensure that NIOSH-approved parts are used, and repairs are made in accordance with manufacturer's recommendations and specifications.
3. Employees must perform a seal check in accordance with protocol that is discussed during training before each use of a respirator.
4. Tight-fitting respirators must not be worn when facial hair or other conditions interfere with the face-to-facepiece seal or valve function. This includes situations where eyewear or other personal protective equipment is used.
5. Employees must not use a respirator when exposures or conditions within the workplace affect the integrity of the respirator.
6. Employees must leave the respirator use area when they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece.
7. Employees must leave the respirator use area before a respirator is removed and when respirator cartridges or filter elements are replaced.
8. Respirators must be cleaned and disinfected as often as necessary to be maintained in a sanitary condition. Respirators used for emergencies must be cleaned and disinfected before and after each use.
9. Respirators must not be shared with other employees.

10. Respirators must be properly stored to protect them from damage, deformation, contamination, dust, sunlight, moisture, and chemicals.
11. Employees must contact the EH&S Office when significant changes occur in the workplace that might affect a respirator's effectiveness. This includes increased duration of exposure to certain hazards, new hazards introduced into the work environment, and changes in how certain tasks are performed.
12. Employees must contact the EH&S Office when changes in health or physiology affects one's ability to use a respirator safely.

## **VI. Non-mandatory Use of Respiratory Protection**

Employees are not encouraged to use respirators for airborne hazards within the workplace that do not exceed exposure limits established by OSHA standards. However, if an employee uses a respirator that is not supplied in accordance with SUNY Cortland's Respiratory Protection Program (i.e., voluntary use), the EH&S Office will provide the employee with a copy of Appendix D of the OSHA Respiratory Protection Standard and apprise the employee of the information in this appendix and other information that is pertinent to use of respirators.

## **VII. Student Use of Respiratory Protection**

A very limited number of students are approved to use respirators at SUNY Cortland. In instances where students are approved to use respirators, they are expected to pay for their respirators and observe all of the requirements outlined in this program. Additionally, instructors must enforce use, care, and storage requirements for their students who use respirators.

Students will observe all fit testing, training, and respirator use requirements that are outlined in Section V; however, medical evaluations are handled somewhat differently. For medical evaluations, the EH&S Office will supply students with the medical questionnaire used for students. This questionnaire will be evaluated by the SUNY Cortland Student Health Service physician. After the questionnaire is evaluated, the Student Health Service physician will provide a written recommendation that indicates: 1) limitations on respirator use, if applicable; 2) the need, if any, for follow-up medical evaluations; and 3) the student has been provided with a copy of the written recommendation. Moreover, students will confer with the Student Health Service physician if health issues related to the use of a respirator arise. Records of student medical evaluations are confidential and will be maintained by the EH&S Office for 30 years.

**Table 1 – Respirator Use Table**

<b>Airborne Exposures</b>	<b>Cartridge Type [respirators are half-face except for powered air purifying respirators (PAPR)]</b>	<b>Affected Offices</b>
Asbestos  (includes disturbances, removals, clean-up, brake/clutch jobs, accessing posted areas)	High Efficiency Particulate Air (HEPA) cartridge, or PAPR with HEPA cartridge	Custodial Services HVAC Masons Plumbers
Chemicals	Defender cartridge with HEPA cartridge; or OV cartridge with HEPA cartridge	Art Department Chemistry HVAC Maintenance Pool
Clay Mixing	HEPA cartridge	Art Department
Dusts  (includes certain exposures to wood dust, plaster, textile fibers, and soot)	HEPA cartridge; Chemical cartridge with HEPA cartridge; PAPR with HEPA cartridge; or P100 respirator	Art Department Custodial Services HVAC Maintenance Masons Motor Pool Paint Shop Performing Arts Plumbers
Forging, Grinding, Welding  (includes exposures to fumes and metal dust)	HEPA cartridge; or P100 respirator	Art Department HVAC Maintenance Masons Motor Pool Performing Arts Plumbers
Painting	PAPR with organic vapor cartridge; Organic vapor cartridge with HEPA cartridge; or organic vapor cartridge and paint mist filter	Art Department Carpentry Shop Grounds Paint Shop Performing Arts
Pesticides	Organic vapor and HEPA cartridge pre-filter	Grounds HVAC
Sand Blasting	HEPA cartridge	Art Department Masons Motor Pool
Pathogens	N-95	Student Health Services Custodial Services