



## **RESPIRATORY PROTECTION PROGRAM**

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Summary of Changes

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Section	Change
B	Added: student workers throughout when referring to employees
Definitions	Moved to Section L
C (1) c	Changed: respiratory hazard assessments to workplace assessments
C (1) e	Changed to read: assist departments, as needed, evaluate engineering and administrative controls
C (1) g	Added: Issue respirator Id cards to those who pass quantitative fit tests
C (2) c	Changed: respiratory hazard assessment to workplace assessments
C (2) e	Added: storage bags as equipment provided by Department Managers and Supervisors
C (2) g	Added: during normal work hours at the end of the sentence
C (3) g	Added: and wear respirator properly during use
C (4)	Section title changed to: Physician or Other Licensed Health Care Professional (PLHCP)
D (1)	Replaced: link to Respirator Medical Evaluation Questionnaire with web address location
D (2) note	Changed: off-campus health care provider to PLHCP
D (3)	Added: PLHCP reviews the questionnaire and determines if the employee or student worker needs a medical evaluation

F (2) a	Changed: Bring their own respirators to the fit test
F (2) c	Removed: and receive Respirator Identification card, if they have passed the fit test
G (1)	Added at the beginning" Department managers and supervisors
G (1)	Shortened: removed specific reference to CHIMERA
G (2)	Added at the beginning: Workplace
G (5) c	Changed: MUC to the exposure level
H (1) b	Changed to read: fitting properly
H (3)	Reworded to: Send completed evaluations to RMS for review
H (4)	Changed to: Filters should be replaced according to Section C2F and when:
L & M	Sections moved to Appendix C
K (2) an	Appendix changed from C to D
K (2) b	Off-campus health care provider changed to PLHCP
Definitions	Removed definition for Maximum Use Concentration (MUC)
Appendix C	Information previously shown in Section L & M
Appendix D	Formerly Appendix C



## A. SCOPE AND APPLICATION

The Respiratory Protection Program is established in accordance with 29 CFR 1910.134 "Respiratory Protection" and describes the program elements necessary to protect employees from the harmful effects of inhaled hazardous substances at all University of Nevada, Las Vegas (UNLV) properties.

## B. COMPLIANCE WITH PROGRAM

This program applies to all UNLV employees and student workers who wear respirators while performing job tasks.

## C. DUTIES AND RESPONSIBILITIES

### (1) Risk Management and Safety (RMS)

- a. Establish the Respiratory Protection Program for UNLV.
- b. Identify a Respiratory Protection Program Administrator from the RMS staff.
- c. Assist departments as needed, to perform workplace assessments and respiratory program evaluations.
- d. Review respiratory program evaluations completed by departments.
- e. Assist departments, as needed to evaluate engineering and administrative controls.
- f. Offer training and fit testing for employees and student workers.
- g. Issue respirator ID cards to those who pass quantitative fit tests.

### (2) Department Assistant Directors, Managers and Supervisors

- a. Implement the Respiratory Protection Program.
- b. Ensure an adequate number of employees are trained and qualified to safely perform assigned duties.
- c. Ensure employee medical evaluations, training and fit requirements are current and being monitored/maintained.
- d. Inform RMS of proposed engineering and administrative controls to address airborne contamination.

- e. Perform workplace assessments to identify hazards and respiratory protection needed.
- f. Perform program evaluations to assess effectiveness of respirator use in their area.
- g. Provide appropriate respirators, filters, parts, and storage bags at no cost to employees and student workers.
- h. Communicate cartridge change out schedules to employees and student workers as determined by:
  - i. End of service life indicators (ESLI).
  - ii. Filter manufacturer's change out schedule.
  - iii. Department's schedule based on hazardous substances present and concentration.
- i. Allow employees and student workers time to complete medical questionnaires, training, and fit testing during normal work hours.
- j. Evaluate respirators and cartridges when:
  - i. There are changes in the work area.
  - ii. Changes in the degree of employees' and student workers' exposures to hazardous conditions.
  - iii. When cleaning, inspecting, storing, repairing and change out.
- k. Provide adequate respirator storage locations.
- l. Provide funding for all medical evaluations and equipment procurement.

### (3) Employees and Student Workers

- a. Complete medical evaluations, Respiratory Protection Training and fit testing requirements for each type of respirator used.
- b. Complete fit tests if additional respirators are required beyond which they were originally tested.

- c. Inspect respirators for cleanliness and defective parts before use.
  - d. Turn in unusable respirators to supervisor for replacement.
  - e. Clean and disinfect respirators according to the following:
    - i. Manufacturer instructions or the OSHA protocol (Appendix A).
    - ii. Exclusive Use – As often as necessary.
    - iii. Multiple Users – Each time before use.
  - f. Store respirators in plastic bags and appropriate locations, to prevent:
    - i. Distortion, damage, dirt and dust.
    - ii. Contamination and contact with harmful chemicals.
    - iii. Exposure to sunlight, temperature extremes and excessive moisture.
  - g. Perform user seal checks each time the respirator is worn and wear respirator properly during use.
- (4) Physician or Other Licensed Health Care Professional (PLHCP)
- a. Review “Respirator Medical Evaluation Questionnaires.”
  - b. Determine if employees and student workers are medically cleared for respirator use.
  - c. Provide “Respirator Qualification and Recommendations” letters to RMS and employees evaluated.
  - d. Refer employees and student workers requiring follow-up examinations to appropriate (PLHCP).
  - e. Maintain medical files for all employees and student workers evaluated for respirator use.

## D. MEDICAL EVALUATIONS

- (1) Employees and student workers completes the “Respirator Medical Evaluation Questionnaire” Part A, sections 1 and 2.



The questionnaire can be accessed at: OSHA 1910.134 Appendix C.

- (2) Employees and student workers sends or delivers questionnaire to PLHCP for review.

Note: PLHCP contact information can be obtained by calling RMS.

- (3) PLHCP reviews the questionnaire and determines if the employee or student worker needs a medical evaluation.
- (4) Employees or student workers completes a medical evaluation (if warranted) and any consultations and/or diagnostic procedures.
- (5) Department managers and supervisors provide additional information, if requested, to the PLHCP to complete the medical evaluation process. This information may include:
  - a. Type and weight of respirator to be used.
  - b. Duration and frequency of respirator use.
  - c. Expected physical work effort.
  - d. Temperature and humidity extremes.
- (6) The PLHCP sends RMS, the “Respirator Qualification and Recommendations” letter, or other documentation which indicates respirator use status for the employee or student worker.
- (7) After receiving the initial certification for respirator use, an employee may require additional medical evaluations if:
  - a. A reevaluation is deemed necessary.
  - b. Employees or student workers describes medical signs/symptoms which may indicate problems while using respirators.
  - c. Changes occur in the workplace that may increase the physiological burden on the employee.

## E. TRAINING

- (1) Respiratory Protection Training will be provided to employees and student workers annually and more frequently if there are:



- a. Changes in the workplace or types of respirators that cause previous training to become obsolete.
  - b. Inadequacies in employee and student worker knowledge.
  - c. Employees and student workers have not retained the necessary understanding or skill.
  - d. Other situations suggesting additional training is necessary to ensure safe respirator use.
- (2) This training is available as an on-line training course on the RMS website and covers the information required by OSHA.
  - (3) Respirator training, fit testing, and medical evaluations will be provided at no cost to employees and student workers. Training, fit testing and medical evaluations may be discontinued when job duties no longer require the use of respirators.

## F. FIT TESTING PROCEDURE

- (1) Employees and student workers will contact RMS to schedule an appointment to receive fit test for the respirators that will be used.
- (2) Employees and student workers will:
  - a. Bring their own respirators to the fit test.
  - b. Complete user seal checks and obtain a good seal prior to the fit test.
  - c. Sign the fit test report.

## G. WORK PLACE ASSESSMENTS

- (1) Department managers and supervisors, with assistance from RMS as needed, will perform workplace assessments to determine if respiratory hazards are present and methods needed to protect employees; including the use of engineering and administrative controls.
- (2) Workplace Assessments determine:
  - a. Respiratory hazards in the workplace.
  - b. Chemical state and physical form of hazards present.
  - c. Employees' potential exposure from these hazards.





- (3) The following sources should be reviewed when completing assessments:
  - a. Chemical inventory for work areas.
  - b. Safety Data Sheets (SDS) for the chemicals in your inventory.
  - c. Personal Protective Equipment (PPE) assessments conducted for employees and student workers job tasks.
  - d. RMS inspection reports and other special reports/studies outlining areas of concern.
- (4) Once the assessment has been completed, department managers and supervisors will consult with RMS to determine if the hazards can be mitigated without the use of respiratory protection.
- (5) If the hazards cannot be mitigated without respiratory protection, then:
  - a. Determine the type of respiratory protection needed to prevent unsafe/unhealthy exposure to chemicals and conditions.
  - b. Acquire and issue respirators and filters that are appropriate for the chemical state and physical form of the contaminant.
  - c. Select respirator to ensure protection at, or below, the exposure level.
  - d. Arrange for medical evaluations, training and fit testing for exposed employees and student workers.

## H. PROGRAM EVALUATIONS

- (1) Program evaluations will be conducted by managers and supervisors who have respirator users. Program evaluations assess:
  - (a) Employees and student workers' views on program effectiveness and problems encountered while using respirators.
  - (b) Issues concerning respirators fitting properly.
  - (c) Respirators selected for hazards and workplace conditions experienced.
  - (d) Maintenance of respirators.



- (2) The worksheet at Appendix B should be used to perform evaluations and document results.
- (3) Send completed evaluations to RMS for review.

## I. FILTERS

- (1) Only National Institute of Occupational Safety and Health (NIOSH) certified filters, cartridges and canisters should be used.
- (2) NIOSH approved labels should not be removed, defaced or obscured.
- (3) Employees and student workers should check respirators for correct filters before use.
- (4) Filters should be replaced according to section C(2)f and when:
  - a. Detecting a vapor or gas break through.
  - b. Or experiencing a change in breathing resistance/leakage during use.

## J. IMMEDIATELY DANGEROUS TO LIFE AND HEALTH (IDLH) ATMOSPHERES

- (1) IDLH locations require monitoring, special equipment and procedures.
- (2) Before entering potential IDLH locations, contact RMS for instructions and the identification of proper equipment to be used. Note: For emergency use respirators/SCBA's and breathing air quality, see Appendix C.

## K. NON-MANDATORY RESPIRATOR USE

- (1) Employees and student workers may elect to use respirators, though not required for job tasks assigned.
- (2) Requirements for respirator users in this category include:
  - a. Receiving a copy of OSHA Appendix D (see Appendix D).
  - b. Completing a "Respirator Medical Evaluation Questionnaire" and submitting it to the PLHCP for review.



- c. Obtaining a copy of the “Respirator Qualification and Recommendations” letter, which indicates respirator use status for employees and student workers.

## L. DEFINITIONS

- (1) Atmosphere-Supplying Respirator - Respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.
- (2) Fit Test – The use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.
- (3) Immediately Dangerous to Life or Health (IDLH) – An atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual’s ability to escape from a dangerous atmosphere.
- (4) Oxygen Deficient Atmosphere – An atmosphere with oxygen content below 19.5% by volume.
- (5) User Seal Check – An action conducted by the respirator user to determine if the respirator is properly seated on the face.

## M. ADDITIONAL INFORMATION

- (1) Appendix A – “Respiratory Cleaning Procedures” (OSHA Appendix B-2)
- (2) Appendix B – “Respirator Program Evaluation Worksheet”
- (3) Appendix C – “Emergency Use Respirators/SCBA’s” and “Breathing Air Quality”
- (4) Appendix D - “Information for Employees Using Respirators When not required Under Standard” (OSHA Appendix D)

## UNLV - Appendix A

### Respirator Cleaning Procedures - (OSHA Appendix B-2)

These procedures are provided for employer use when cleaning respirators. They are general in nature, and the employer as an alternative may use the cleaning recommendations provided by the manufacturer of the respirators used by their employees, provided such procedures are as effective as those listed here in Appendix B- 2. Equivalent effectiveness simply means that the procedures used must accomplish the objectives set forth in Appendix B-2, i.e., must ensure that the respirator is properly cleaned and disinfected in a manner that prevents damage to the respirator and does not cause harm to the user.

#### *I. Procedures for Cleaning Respirators*

- A. Remove filters, cartridges, or canisters. Disassemble face pieces by removing speaking diaphragms, demand and pressure- demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
- B. 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.
- C. Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), preferably running water.
- D. When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:
  1. 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); or,
  2. 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); or,
  3. Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.
- E. Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), preferably running water. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on face pieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
- F. Components should be hand-dried with a clean lint-free cloth or air-dried.
- G. Reassemble face piece, replacing filters, cartridges, and canisters where necessary.
- H. Test the respirator to ensure that all components work properly



## **UNLV - Appendix B**

Note: The "Respirator Program Evaluation Worksheet" can be obtained by contacting RMS, OSH.

**UNLV - Appendix C****EMERGENCY USE RESPIRATORS/SCBA's**

- (1) Inspect monthly and before/after each use.
- (2) Document inspections by showing:
  - a. Name of person performing the inspection.
  - b. Findings identified during the inspection.
  - c. The serial number (or other respirator identifying methods) and remedial action required.
- (3) Retain documentation of the inspection until the next inspection has been completed and documented.
- (4) Defective respirators are removed from service until repaired or replaced.
- (5) Repairs will only be accomplished by individuals trained for this purpose using manufacturer's recommendations and approved NIOSH parts.
- (6) Respirators will be cleaned and disinfected after each use.
- (7) Respirators will be kept accessible in the work area.
- (8) Users of SCBA's will ensure that checks, inspections and filling of cylinders are completed as specified by the manufacturer.

**UNLV - Appendix C (continued)****BREATHING AIR QUALITY**

- (1) Owners and users of atmosphere-supplying respirators (supplied – air and SCBA) should ensure the following:
  - a. Respirators are only used with breathing gases of high purity.
  - b. The specifications listed in OSHA Standard 1910.134 (i) are included in purchase requests when obtaining replacement breathing air/oxygen.
  - c. Certificates of analysis from suppliers are reviewed to ensure that breathing air provided is approved and meets specifications.
  - d. Compressed oxygen is not used in respirators that have previously used compressed air.
- (2) Cylinders shall be NIOSH approved breathing-gas containers that are tested, marked and maintained in accordance with the appropriate NIOSH and Department of Transportation (DOT) Standards.



**UNLV - Appendix D**  
**Information for Employees**  
**Respirators Not Required**  
**(OSHA Appendix D)**

**Appendix D to Sec. 1910.134 (Mandatory) 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 OSHA 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 respirators 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.